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SEQUENCE LISTING

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<211> 1894 <212> DNA

<213> Homo sapiens

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<213> Homo sapiens
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tteetteteg acceetacat tgeeeteaat gtggaegaet egegeategg eeaaaeggee
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	attccaagga					660
	taggatgcgc					720
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<211> 2083

<212> DNA

<213> Homo sapiens

<400> 14

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<400> 15

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240	agaactctgt	ctcttaagtc	ttggagccct	cgttgttgtt	aggaattctt	cagcatgtgt
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<211> 1215

<212> DNA

<213> Homo sapiens

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<211> 1327

<212> DNA

<213> Homo sapiens

<400> 16

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600 actttgttga acatccttaa gaatgctgat ctcagcttgg cttttcaaac atacacaata 660 tatagaccag gttcagaagg gttcttgaaa ggccccctgt ctgaagaaac agaagcatcg 720 gacagtgttg atggaggtca cgattctgtc attttggatc cagagcgact tgagcctggg ctagatgagg aggacacgga ctttgaggag gaagatgaca accccgactg ggtgtcagag 780 840 ctgaagaagc gagctggatg gcaaggcctg tgcgacagat aatgcctgag gaaatgttcc 900 tgagtcacgc tgaggagagc cttcactcag gagttcatgc tgagatgatc atgagttcat 960 gcgacgtata ttttcctttg gaaacagaat gaagcagagg aaactcttaa tacttaaaat 1020 cgttcttgat tagtatcgtg agtttgaaaa gtctagaact cctgtaagtt tttgaactca 1080 agggagaagg tatagtggaa tgagtgtgag catcgggctt tgcagtccca tagaacagaa atgggatgct agcgtgccac tacctacttg tgtgattgtg ggaaattact taacctcttc 1140 1200 aagccccaat ttcctcaacc ataaaatgaa gataataatg cctacctcag agggatgctg 1260 accacagacc tttatagcag cccgtatgat attattcaca ttatgatatg tgtttattat tatgtgactc tttttacatt tcctaaaggt ttgagaatta aatatattta attatgaakw 1320 1327 gaaaaaa

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<212>

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<210> 18

<211> 923

<212> DNA

<213> Homo sapiens

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acaattatcc actacagaag tcctgcctct ctaagctttg caactgtacg tacatctatt
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<213> Homo sapiens
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<223> "n" can be any nucleotide 'a', 'c', 'g' or 't'
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<210> 19

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geogaagete aceteeceet ggetatgtte etgageggea geageacatt geeeggeagg
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ggtcctacac cagcatcaac agtgaggggg agttcatccc agagaccagc gagcagtgca
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acaacagaca ggaatactca gatcgggaaa ctcagcttta tgacaaaggg gtcaaaggtg
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qaacctaccc ccqqcqctac cacqtqtctq tgcaccacaa ggactacagt gatggcagaa
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                                                                     1620
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<210> 20
<211> 1832
<212> DNA
<213> Homo sapiens
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<221> -
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<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'
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                                                                     180
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cccccacage accccggget ggcgtgaggg tetecettga tetgagaatg getacetete
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                                                                     300
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<211> 502
<212> DNA
<213> Homo sapiens
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                                                                     300
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502
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<400>

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<211> 1148
<212> DNA
<213> Homo sapiens
<220>
<221> -
<222> (1)..(1148)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'
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<211> 1679
<212> DNA
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<222> (1)..(1679)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'
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<210> 26
<211> 897
<212> DNA
<213> Homo sapiens
<220>
<221> <222> (1)..(897)
<223> "n" can be any nucleotide 'a', 'c', 'g' or 't'

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<212> DNA

<213> Homo sapiens

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<211> 1424

<212> DNA

<213> Homo sapiens

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<400> 29

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<211> 2027

<212> DNA

<213> Homo sapiens

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<212> DNA <213> Homo sapiens

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<211> 1665

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<213> Homo sapiens

<400> 56

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960

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<212> DNA

<213> Homo sapiens

<400> 57

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<211> 1097

<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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<211> 1662

<212> DNA

<213> Homo sapiens

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<210> 62

<211> 1149

<212> DNA

<213> Homo sapiens

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<212> DNA
<213> Homo sapiens

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<211> 765

<212> DNA <213> Homo sapiens

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<213> Homo sapiens
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<213> Homo sapiens

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<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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<213> Homo sapiens
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<211> 1032

<212> DNA

<213> Homo sapiens

<400> 79

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<211> 2234

<212> DNA

<213> Homo sapiens

<400> 80

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<400> 81

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<211> 2608

<212> DNA

<213> Homo sapiens

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<211> 1237

<212> DNA

<213> Homo sapiens

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<210> 83
<211> 1286
<212> DNA
<213> Homo sapiens
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<222> (1)..(1286)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'
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<210> 84
<211> 752
<212> DNA
<213> Homo sapiens

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<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'
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<211> 1826

<212> DNA

<213> Homo sapiens

<400> 85

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<213> Homo sapiens

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<211> 434

<212> PRT

<400> 92

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Leu Phe Val Ser Thr Leu Asp Gly Ser Leu His Ala Val Ser Lys Arg
35 40 45

Thr Gly Ser Ile Lys Trp Thr Leu Lys Glu Asp Pro Val Leu Gln Val 50 55 60

Pro Thr His Val Glu Glu Pro Ala Phe Leu Pro Asp Pro Asn Asp Gly 65 70 75 80

Ser Leu Tyr Thr Leu Gly Ser Lys Asn Asn Glu Gly Leu Thr Lys Leu 85 90 95

Pro Phe Thr Ile Pro Glu Leu Val Gln Ala Ser Pro Cys Arg Ser Ser 100 105 110

Asp Gly Ile Leu Tyr Met Gly Lys Lys Gln Asp Ile Trp Tyr Val Ile 115 120 125

Asp Leu Leu Thr Gly Glu Lys Gln Gln Thr Leu Ser Ser Ala Phe Ala 130 135 140

Asp Ser Leu Cys Pro Ser Thr Ser Leu Leu Tyr Leu Gly Arg Thr Glu 145 150 155 160

Tyr Thr Ile Thr Met Tyr Asp Thr Lys Thr Arg Glu Leu Arg Trp Asn 165 170 175

Ala Thr Tyr Phe Asp Tyr Ala Ala Ser Leu Pro Glu Asp Glu Gly Asp 180 185 190

Tyr Lys Met Ser His Phe Val Ser Asn Gly Asp Gly Leu Val Val Thr 195 200 205

Val Asp Ser Glu Ser Gly Asp Val Leu Trp Ile Gln Asn Tyr Ala Ser 210 215 220

Pro Val Val Ala Phe Tyr Val Trp Gln Arg Glu Gly Leu Arg Lys Val 225 230 235 240

Met His Ile Asn Val Ala Val Glu Thr Leu Arg Tyr Leu Thr Phe Met 245 250 255

Ser Gly Glu Val Gly Arg Ile Thr Lys Trp Lys Tyr Pro Phe Pro Lys 260 265 270

Glu Thr Glu Ala Lys Ser Lys Leu Thr Pro Thr Leu Tyr Val Gly Lys 275 280 285 Tyr Ser Thr Ser Leu Tyr Ala Ser Pro Ser Met Val His Glu Gly Val 290 295 300

Ala Val Val Pro Arg Gly Ser Thr Leu Pro Leu Leu Glu Gly Pro Gln 305 310 315 320

Thr Asp Gly Val Thr Ile Gly Asp Lys Gly Glu Cys Val Ile Thr Pro 325 330 335

Ser Thr Asp Val Lys Phe Asp Pro Gly Leu Lys Ser Lys Asn Lys Leu 340 345 350

Asn Tyr Leu Arg Asn Tyr Trp Leu Leu Ile Gly His His Glu Thr Pro 355 360 365

Leu Ser Ala Ser Thr Lys Met Leu Glu Arg Phe Pro Asn Asn Leu Pro 370 375 380

Lys His Arg Glu Asn Val Ile Pro Ala Asp Ser Glu Lys Lys Ser Phe 385 390 395 400

Glu Glu Thr Leu Leu Gln Met Thr Ser Val Phe Ser Trp Ile Leu Asn 405 410 415

Leu Pro Ser Lys Glu Glu Val Phe Ala Phe Leu Arg Ile Phe Glu Lys 420 425 430

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<210> 93

<211> 232

<212> PRT

<213> Homo sapiens

<400> 93

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Ser Pro Glu Thr Ser Arg Ser Leu Pro Ala Pro Gln Asp Asn Asp Phe 50 55 60

Leu Ser Arg Lys Ala Gln Asp Cys Tyr Phe Met Lys Leu His His Cys 65 70 75 80

Pro Gly Asn His Ser Trp Asp Ser Thr Ile Ser Gly Ser Gln Arg Ala 85 90 95

Ala Phe Cys Asp His Lys Thr Thr Pro Cys Ser Ser Ala Ile Ile Asn

100 105 110

Pro Leu Ser Thr Ala Gly Asn Ser Glu Arg Leu Gln Pro Gly Ile Ala 115 120 125

Gln Gln Trp Ile Gln Ser Lys Arg Glu Asp Ile Val Asn Gln Met Thr 130 135 140

Glu Ala Cys Leu Asn Gln Ser Leu Asp Ala Leu Leu Ser Arg Asp Leu 145 150 155 160

Ile Met Lys Glu Asp Tyr Glu Leu Val Ser Thr Lys Pro Thr Arg Thr
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Ser Lys Val Arg Gln Leu Leu Asp Thr Thr Asp Ile Gln Gly Glu Glu 180 185 190

Phe Ala Lys Val Ile Val Gln Lys Leu Lys Asp Asn Lys Gln Met Gly
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Leu Gln Pro Tyr Pro Glu Ile Leu Val Val Ser Arg Ser Pro Ser Leu 210 215 220

Asn Leu Leu Gln Asn Lys Ser Met 225 230

<210> 94

<211> 209

<212> PRT

<213> Homo spaiens

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Asp Arg Gly Glu Val Thr Phe Glu Lys Ile Phe Ser Gln Lys Leu Gly 50 60

Tyr Leu Leu Phe Arg Asp Phe Cys Leu Asn His Leu Glu Glu Ala Arg 65 70 75 80

Pro Leu Val Glu Phe Tyr Glu Glu Ile Lys Lys Tyr Glu Lys Leu Glu 85 90 95

Thr Glu Glu Glu Arg Val Ala Arg Ser Arg Glu Ile Phe Asp Ser Tyr 100 105 110

Ile Met Lys Glu Leu Leu Ala Cys Ser His Pro Phe Ser Lys Ser Ala 115 120 125

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Val	Phe	Gln	Lys	Phe 165	Ile	Glu	Arg	Val	Ala 170	Leu	Ala	Ala	Gly	Ala 175	Ala
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Lys	Asp	Ala 35	Pro	Pro	Leu	Pro	Pro 40	Leu	Val	Val	Phe	Asn 45	His	Leu	Thr
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Ala 65	Leu	Tyr	Asp	Tyr	Thr 70	Ala	Met	Asn	Asp	Arg 75	Asp	Leu	Gln	Met	Leu 80
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Ala	Arg	Ser	Leu 100	Val	Thr	Gly	Arg	Glu 105	Gly	Tyr	Val	Pro	Ser 110	Asn	Phe
Val	Ala	Arg 115	Val	Glu	Ser	Leu	Glu 120	Met	Glu	Arg	Trp	Phe 125	Phe	Arg	Ser
Gln	Gly 130	Arg	Lys	Glu	Ala	Glu 135	Arg	Gln	Leu	Leu	Ala 140	Pro	Ile	Asn	Lys
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Ser	Leu	Ser	Val	Lys 165	Asp	Val	Thr	Thr	Gln 170	Gly	Glu	Leu	Ile	Lys 175	His

Tyr Lys Ile Arg Cys Leu Asp Glu Gly Gly Tyr Tyr Ile Ser Pro Arg 180 185 190

Ile Thr Phe Pro Ser Leu Gln Ala Leu Val Gln His Tyr Ser Ser Tyr 195 200 205

Tyr Lys Asn Asn Met Lys Val Ala Ile Lys Thr Leu Lys Glu Gly Thr 210 215 220

Met Ser Pro Glu Ala Phe Leu Gly Glu Ala Asn Val Met Lys Ala Leu 225 230 235 240

Gln His Glu Arg Leu Val Arg Leu Tyr Ala Val Val Thr Lys Glu Pro 245 250 255

Ile Tyr Ile Val Thr Glu Tyr Met Ala Arg Gly Cys Leu Leu Asp Phe 260 265 270

Leu Lys Thr Asp Glu Gly Ser Arg Leu Ser Leu Pro Arg Leu Ile Asp 275 280 285

Met Ser Ala Gln Ile Ala Glu Gly Met Ala Tyr Ile Glu Arg Met Asn 290 295 300

Ser Ile His Arg Asp Leu Arg Ala Ala Asn Ile Leu Val Ser Glu Ala 305 310 315 320

Leu Cys Cys Lys Ile Ala Asp Phe Gly Leu Ala Arg Ile Ile Asp Ser 325 330 335

Glu Tyr Thr Ala Gln Glu Gly Ala Lys Phe Pro Ile Lys Trp Thr Ala 340 345 350

Pro Glu Ala Ile His Phe Gly Val Phe Thr Ile Lys Ala Asp Val Trp 355 360 365

Ser Phe Gly Val Leu Leu Met Glu Val Val Thr Tyr Gly Arg Val Pro 370 375 380

Tyr Pro Gly Met Ser Asn Pro Glu Val Ile Arg Asn Leu Glu Arg Gly 385 390 395 400

Tyr Arg Met Pro Arg Pro Asp Thr Cys Pro Pro Glu Leu Tyr Arg Gly
405 410 415

Val Ile Ala Glu Cys Trp Arg Ser Arg Pro Glu Glu Arg Pro Thr Phe
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<210> 96

<211> 82

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<212> PRT
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<213> Homo sapiens

<400> 96

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Lys Lys Ile Arg Leu Asp Thr Glu Thr Glu Gly Val Pro Ser Thr Ala 35 40 45

Ile Arg Glu Ile Ser Leu Leu Lys Glu Leu Asn His Pro Asn Ile Val 50 55 60

Lys Leu Leu Asp Val Ile His Thr Glu Asn Lys Asn Ile Ser Leu Lys 65 70 75 80

Glu Gly

<210> 97

<211> 118

<212> PRT

<213> Homo sapiens

<400> 97

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Tyr Glu Asn Tyr Glu Pro Lys Glu Ile Leu Gly Arg Gly Val Ser Ser 20 25 30

Val Val Arg Arg Cys Ile His Lys Pro Thr Ser Gln Glu Tyr Ala Val 35 40 45

Lys Val Ile Asp Val Thr Gly Gly Gly Ser Phe Ser Pro Glu Glu Val 50 55 60

Arg Glu Leu Arg Glu Ala Thr Leu Lys Glu Val Asp Ile Leu Arg Lys 65 70 75 80

Val Ser Gly His Pro Asn Ile Ser Ile Gln Leu Lys Asp Thr Tyr Glu 85 90 95

Thr Asn Thr Phe Phe Phe Leu Val Phe Asp Leu Met Lys Arg Gly Glu
100 105 110

Leu Phe Asp Leu Pro His
115

112

<210> 98

<211> 167 <212> PRT

<213> Homo sapiens

<400> 98

Val Phe Leu Gly Arg Cys Arg Ser Val Lys Glu Phe Glu Lys Leu Asn 1 5 10 15

Arg Ile Gly Glu Gly Thr Tyr Gly Ile Val Tyr Arg Ala Arg Asp Thr 20 25 30

Gln Thr Asp Glu Ile Val Ala Leu Lys Lys Val Arg Met Asp Lys Glu 35 40 45

Lys Asp Gly Ile Pro Ile Ser Ser Leu Arg Glu Ile Thr Leu Leu Leu 50 55 60

Arg Leu Arg His Pro Asn Ile Val Glu Leu Lys Glu Val Val Gly 65 70 75 80

Asn His Leu Glu Ser Ile Phe Leu Val Met Gly Tyr Cys Glu Gln Asp 85 90 95

Leu Ala Ser Leu Leu Glu Asn Met Pro Thr Pro Phe Ser Glu Ala Gln
100 105 110

Val Lys Cys Ile Val Leu Gln Val Leu Arg Gly Leu Gln Tyr Leu His 115 120 125

Arg Asn Phe Ile Ile His Arg Asp Leu Lys Val Ser Asn Leu Leu Met 130 135 140

Thr Asp Lys Gly Cys Val Lys Thr Gly Gly Cys Asn Leu Gly Gln Ala 145 150 155 160

Trp Ser Leu Asp Gly Thr Trp 165

<210> 99

<211> 141

<212> PRT

<213> Homo sapiens

<400> 99

Met Ser Ser Ala Gly Gly Val Ser Arg Arg Leu Ala Ala Val Arg Ser

1 10 15

Thr Val Leu Cys Arg Ala Val Gly Cys Ile Leu Ala Glu Leu Leu Ala 20 25 30

His Arg Pro Leu Leu Pro Gly Thr Ser Glu Ile His Gln Ile Asp Leu 35 40 45

Ile Val Gln Leu Leu Gly Thr Pro Ser Glu Asn Ile Trp Pro Gly Phe 50 55 60

Ser Lys Leu Pro Leu Val Gly Gln Tyr Ser Leu Arg Lys Gln Pro Tyr

65

Asn Asn Leu Lys His Lys Phe Pro Trp Leu Ser Glu Ala Gly Leu Arg 85 90 95

Leu Leu His Phe Leu Phe Met Tyr Asp Pro Lys Lys Arg Ala Thr Ala 100 105 110

Gly Asp Cys Leu Glu Ser Ser Tyr Phe Lys Glu Lys Pro Leu Arg Leu 115 120 125

Pro Ile Ser Gly Val Cys Glu Gly Cys Arg Glu Pro Gly 130 135 140

<210> 100

<211> 119

<212> PRT

<213> Homo sapiens

<400> 100

Val Phe Leu Gly Arg Cys Arg Ser Val Lys Glu Phe Glu Lys Leu Asn 1 5 10 15

Arg Ile Gly Glu Gly Thr Tyr Gly Ile Val Tyr Arg Ala Arg Asp Thr
20 25 30

Gln Thr Asp Glu Ile Val Ala Leu Lys Lys Val Arg Met Asp Lys Glu 35 40 45

Lys Asp Gly Ile Pro Ile Ser Ser Leu Arg Glu Ile Thr Leu Leu Leu 50 55 60

Arg Leu Arg His Pro Asn Ile Leu Pro Ala Arg Ala Pro Trp Lys Gly 65 70 75 80

Arg Ser Gly Gly Ser Ile Arg Gly Cys Arg Gly Leu Met Trp Ser Ser 85 90 95

Ser Leu Cys Trp Lys Cys Ala Thr Thr Ala Ser Trp Glu Glu Trp Trp
100 105 110

Val Gln Ser Pro Arg Cys Leu 115

<210> 101

<211> 756

<212> PRT

<213> Homo sapiens

<400> 101

Met Gly Glu Ala Glu Lys Phe His Tyr Ile Tyr Ser Cys Asp Leu Asp
1 10 15

Ile Asn Val Gln Leu Lys Ile Gly Ser Leu Glu Gly Lys Arg Glu Gln
20 25 30

Lys	Ser	Tyr 35	Lys	Ala	Val	Leu	Glu 40	Asp	Pro	Met	Leu	Lys 45	Phe	Ser	Gly
Leu	Tyr 50	Gln	Glu	Thr	Cys	Ser 55	Asp	Leu	Tyr	Val	Thr 60	Cys	Gln	Val	Phe
Ala 65	Glu	Gly	Lys	Pro	Leu 70	Ala	Leu	Pro	Val	Arg 75	Thr	Ser	Tyr	Lys	Ala 80
Phe	Ser	Thr	Arg	Trp 85	Asn	Trp	Asn	Glu	Trp 90	Leu	Lys	Leu	Pro	Val 95	Lys
Tyr	Pro	Asp	Leu 100	Pro	Arg	Asn	Ala	Gln 105	Val	Ala	Leu	Thr	Ile 110	Trp	Asp
Val	Tyr	Gly 115	Pro	Gly	Lys	Ala	Val 120	Pro	Val	Gly	Gly	Thr 125	Thr	Val	Ser
Leu	Phe 130	Gly	Lys	Tyr	Gly	Met 135	Phe	Arg	Gln	Gly	Met 140	His	Asp	Leu	Lys
Val 145	Trp	Pro	Asn	Val	Glu 150	Ala	Asp	Gly	Ser	Glu 155	Pro	Thr	Lys	Thr	Pro 160
Gly	Arg	Thr	Ser	Ser 165	Thr	Leu	Ser	Glu	Asp 170	Gln	Met	Ser	Arg	Leu 175	Ala
Lys	Leu	Thr	Lys 180	Ala	His	Arg	Gln	Gly 185	His	Met	Val	Lys	Val 190	Asp	Trp
Leu	Asp	Arg 195	Leu	Thr	Phe	Arg	Glu 200	Ile	Glu	Met	Ile	Asn 205	Glu	Ser	Val
Lys	Arg 210	Ser	Ser	Asn	Phe	Met 215	Tyr	Leu	Met	Gly	Gly 220	Phe	Arg	Cys	Val
Lys 225	Cys	Asp	Asp	Lys	Glu 230	Tyr	Gly	Ile	Val	Tyr 235	Tyr	Glu	Lys	Asp	Gly 240
Asp	Glu	Ser	Ser	Pro 245	Ile	Leu	Thr	Ser	Phe 250	Glu	Leu	Val	Lys	Val 255	Pro
Asp	Pro	Gln	Met 260	Ser	Leu	Glu	Asn	Leu 265	Val	Glu	Ser	Lys	His 270	His	Asn
Leu	Pro	Arg 275	Ser	Leu	Arg	Ser	Gly 280	Pro	Ser	Asp	His	Asp 285	Leu	Lys	Pro
Tyr	Pro 290	Ser	Pro	Arg	Asp	Gln 295	Leu	Lys	Asn	Ile	Val 300	Ser	Tyr	Pro	Pro
Ser 305	Lys	Pro	Pro	Thr	Tyr 310	Glu	Glu	Gln	Asp	Leu 315	Val	Trp	Glu	Phe	Arg 320
Tyr	Tyr	Leu	Thr	Asn 325	Gln	Asp	Lys	Ala	Leu 330	Thr	Lys	Ile	Leu	Thr 335	Ser

- Val Ile Trp Asp Leu Pro Gln Glu Ala Lys Gln Ala Leu Ala Leu Leu 340 345 350

 Gly Lys Trp Asn Pro Met Asp Val Glu Asp Ser Leu Glu Leu Ile Ser 355 360 365
- Ser His Tyr Thr Asn Pro Thr Val Arg Arg Tyr Ala Val Ala Arg Leu 370 375 380
- Arg Gln Ala Asp Asp Glu Asp Leu Leu Met Tyr Leu Leu Gln Leu Val 385 390 395 400
- Gln Ala Leu Lys Tyr Glu Asn Phe Asp Asp Ile Lys Asn Gly Leu Glu 405 410 415
- Pro Thr Lys Lys Asp Ser Gln Ser Ser Val Ser Glu Asn Val Ser Asn 420 425 430
- Ser Gly Ile Asn Ser Ala Glu Ile Asp Ser Ser Gln Ile Ile Thr Ser 435 440 445
- Pro Leu Pro Ser Val Ser Ser Pro Pro Pro Ala Ser Lys Thr Lys Glu 450 455 460
- Val Pro Asp Gly Glu Asn Leu Glu Gln Asp Leu Cys Thr Phe Leu Ile 465 470 475 480
- Ser Arg Ala Cys Lys Asn Ser Thr Leu Ala Asn Tyr Leu Tyr Trp Tyr · 485 490 495
- Val Ile Val Glu Cys Glu Asp Gln Asp Thr Gln Gln Arg Asp Pro Lys
 500 505 510
- Thr His Glu Met Tyr Leu Asn Val Met Arg Arg Phe Ser Gln Ala Leu 515 520 525
- Leu Lys Gly Asp Lys Ser Val Arg Val Met Arg Ser Leu Leu Ala Ala 530 535 540
- Gln Gln Thr Phe Val Asp Arg Leu Val His Leu Met Lys Ala Val Gln 545 550 555 560
- Arg Glu Ser Gly Asn Arg Lys Lys Lys Asn Glu Arg Leu Gln Ala Leu 565 570 575
- Leu Gly Asp Asn Glu Lys Met Asn Leu Ser Asp Val Glu Leu Ile Pro
 580 585 590
- Leu Pro Leu Glu Pro Gln Val Lys Ile Arg Gly Ile Ile Pro Glu Thr 595 600 605
- Ala Thr Leu Phe Lys Ser Ala Leu Met Pro Ala Gln Leu Phe Phe Lys 610 615 620
- Thr Glu Asp Gly Gly Lys Tyr Pro Val Ile Phe Lys His Gly Asp Asp 625 630 635 640

Leu Arg Gln Asp Gln Leu Ile Leu Gln Ile Ile Ser Leu Met Asp Lys 645 650 655

Leu Leu Arg Lys Glu Asn Leu Asp Leu Lys Leu Thr Pro Tyr Lys Val 660 665 670

Leu Ala Thr Ser Thr Lys His Gly Phe Met Gln Phe Ile Gln Ser Val 675 680 685

Pro Val Ala Glu Val Leu Asp Thr Glu Gly Ser Ile Gln Asn Phe Phe 690 695 700

Arg Lys Tyr Ala Pro Ser Glu Asn Gly Pro Asn Gly Ile Ser Ala Glu 705 710 715 720

Val Met Asp Thr Tyr Val Lys Ser Cys Ala Gly Tyr Cys Val Ile Thr 725 730 735

Tyr Ile Leu Gly Val Gly Asp Arg His Leu Asp Asn Leu Leu Leu Thr
740 745 750

Lys Thr Gly Gly 755

<210> 102

<211> 508

<212> PRT

<213> Homo sapiens

<400> 102

Met Gly Glu Ala Glu Lys Phe His Tyr Ile Tyr Ser Cys Asp Leu Asp 1 5 10 15

Ile Asn Val Gln Leu Lys Ile Gly Ser Leu Glu Gly Lys Arg Glu Gln 20 25 30

Lys Ser Tyr Lys Ala Val Leu Glu Asp Pro Met Leu Lys Phe Ser Gly 35 40 45

Leu Tyr Gln Glu Thr Cys Ser Asp Leu Tyr Val Thr Cys Gln Val Phe 50 55 60

Ala Glu Gly Lys Pro Leu Ala Leu Pro Val Arg Thr Ser Tyr Lys Ala 65 70 75 80

Phe Ser Thr Arg Trp Asn Trp Asn Glu Trp Leu Lys Leu Pro Val Lys 85 90 95

Tyr Pro Asp Leu Pro Arg Asn Ala Gln Val Ala Leu Thr Ile Trp Asp 100 105 110

Val Tyr Gly Pro Gly Lys Ala Val Pro Val Gly Gly Thr Thr Val Ser 115 120 125

Leu Phe Gly Lys Tyr Gly Met Phe Arg Gln Gly Met His Asp Leu Lys

Val 145	Trp	Pro	Asn	Val	Glu 150	Ala	Asp	Gly	Ser	Glu 155	Pro	Thr	Lys	Thr	Pro 160
Gly	Arg	Thr	Ser	Ser 165	Thr	Leu	Ser	Glu	Asp 170	Gln	Met	Ser	Arg	Leu 175	Ala
Lys	Leu	Thr	Lys 180	Ala	His	Arg	Gln	Gly 185	His	Met	Val	Lys	Val 190	Asp	Trp
Leu	Asp	Arg 195	Leu	Thr	Phe	Arg	Glu 200	Ile	Glu	Met	Ile	Asn 205	Glu	Ser	Val
Lys	Arg 210	Ser	Ser	Asn	Phe	Met 215	Tyr	Leu	Met	Gly	Gly 220	Phe	Arg	Cys	Val
Lys 225	Cys	Asp	Asp	Lys	Glu 230	Tyr	Gly	Ile	Val	Tyr 235	Tyr	Glu	Lys	Asp	Gly 240
Asp	Glu	Ser	Ser	Pro 245	Ile	Leu	Thr	Ser	Phe 250	Glu	Leu	Val	Lys	Val 255	Pro
Asp	Pro	Gln	Met 260	Ser	Leu	Glu	Asn	Leu 265	Val	Glu	Ser	Lys	His 270	His	Asn
Leu	Pro	Arg 275	Ser	Leu	Arg	Ser	Gly 280	Pro	Ser	Asp	His	Asp 285	Leu	Lys	Pro
Tyr	Pro 290	Ser	Pro	Arg	Asp	Gln 295	Leu	Lys	Asn	Ile	Val 300	Ser	Tyr	Pro	Pro
Ser 305	Lys	Pro	Pro	Thr	Tyr 310	Glu	Glu	Gln	Asp	Leu 315	Val	Trp	Glu	Phe	Arg 320
Tyr	Tyr	Leu	Thr	Asn 325	Gln	Asp	Lys	Ala	Leu 330	Thr	Lys	Ile	Leu	Thr 335	Ser
Val	Ile	Trp	Asp 340	Leu	Pro	Gln	Glu	Ala 345	Lys	Gln	Ala	Leu	Ala 350	Leu	Leu
Gly	Lys	Trp 355	Asn	Pro	Met	Asp	Val 360	Glu	Asp	Ser	Leu	Glu 365	Leu	Ile	Ser
Ser	His 370	Tyr	Thr	Asn	Pro	Thr 375	Val	Arg	Arg	Tyr	Ala 380	Val	Ala	Arg	Leu
Arg 385	Gln	Ala	Asp	Asp	Glu 390	Asp	Leu	Leu	Met	Tyr 395	Leu	Leu	Gln	Leu	Val 400
Gln	Ala	Leu	Lys	Tyr 405	Glu	Asn	Phe	Asp	Asp 410	Ile	Lys	Asn	Gly	Leu 415	Glu
Pro	Thr	Lys	Lys 420	Asp	Ser	Gln	Ser	Ser 425	Val	Ser	Glu	Asn	Val 430	Ser	Asn
000	C1.,	Tla	7 an	Cor	777	C1.,	Tlo	7 00	Cor	802	C1 5	Tla	Tlo	Thr	Cor

435 440 445

Pro Leu Pro Ser Val Ser Ser Pro Pro Pro Ala Ser Lys Thr Lys Glu 450 455 460

Val Pro Asp Gly Glu Asn Leu Glu Gln Asp Leu Cys Thr Phe Leu Ile 465 470 475 480

Ser Arg Ala Cys Lys Asn Ser Thr Leu Ala Asn Tyr Leu Tyr Trp Tyr 485 490 495

Val Lys Ile Ile Phe Cys Leu Phe Ser Tyr Tyr Pro 500 505

<210> 103

<211> 140

<212> PRT

<213> Homo sapiens

<400> 103

Met Gly Asn Ala Ala Ala Ala Lys Lys Gly Ser Glu Gln Glu Ser Val 1 5 10 15

Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu 20 25 30

Ser Pro Ala Gln Asn Thr Ala His Leu Asp Gln Phe Glu Arg Ile Lys 35 40 45

Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys 50 55 60

Glu Thr Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val 65 70 75 80

Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu 85 90 95

Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys
100 105 110

Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Pro Gly Glu 115 120 125

Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Arg 130 135 140

<210> 104

<211> 156

<212> PRT

<213> Homo sapiens

<400> 104

Met Val Val Phe Asn Gly Leu Leu Lys Ile Lys Ile Cys Glu Ala Val 1 5 10 15 Ser Leu Lys Pro Thr Ala Trp Ser Leu Arg His Ala Val Gly Pro Arg 20 25 30

Pro Gln Thr Phe Leu Leu Asp Pro Tyr Ile Ala Leu Asn Val Asp Asp 35 40 45

Ser Arg Ile Gly Gln Thr Ala Thr Lys Gln Lys Thr Asn Ser Pro Ala 50 55 60

Trp His Asp Glu Phe Val Thr Asp Val Cys Asn Gly Arg Lys Ile Glu 65 70 75 80

Leu Ala Val Phe His Asp Ala Pro Ile Gly Tyr Asp Asp Phe Val Ala 85 90 95

Asn Cys Thr Ile Gln Phe Glu Glu Leu Leu Gln Asn Gly Ser Arg His
100 105 110

Phe Glu Asp Trp Ile Asp Leu Glu Pro Glu Gly Arg Val Tyr Val Ile 115 120 125

Ile Asp Leu Ser Gly Ser Ser Gly Glu Val Lys Ile Pro Asn Ser Ala 130 135 140

Phe Cys Glu Arg Glu Arg Val Glu Met Arg His Ser 145 150 155

<210> 105

<211> 520

<212> PRT

<213> Homo sapiens

<400> 105

Met Ile Leu Ile Pro Arg Met Leu Leu Val Leu Phe Leu Leu Pro 1 5 10 15

Ile Leu Ser Ser Ala Lys Ala Gln Val Asn Pro Ala Ile Cys Arg Tyr 20 25 30

Pro Leu Gly Met Ser Gly Gly Gln Ile Pro Asp Glu Asp Ile Thr Ala 35 40 45

Ser Ser Gln Trp Ser Glu Ser Thr Ala Ala Lys Tyr Gly Arg Leu Asp 50 55 60

Ser Glu Glu Gly Asp Gly Ala Trp Cys Pro Glu Ile Pro Val Glu Pro 65 70 75 80

Asp Asp Leu Lys Glu Phe Leu Gln Ile Asp Leu His Thr Leu His Phe 85 90 95

Ile Thr Leu Val Gly Thr Gln Gly Arg His Ala Gly Gly His Gly Ile 100 105 110

Glu Phe Ala Pro Met Tyr Lys Ile Asn Tyr Ser Arg Asp Gly Thr Arg

Trp	Ile 130	Ser	Trp	Arg	Asn	Arg 135	His	Gly	Lys	Gln	Val 140	Leu	Asp	Gly	Asn
Ser 145	Asn	Pro	Tyr	Asp	Ile 150	Phe	Leu	Lys	Asp	Leu 155	Glu	Pro	Pro	Ile	Val 160
Ala	Arg	Phe	Val	Arg 165	Phe	Ile	Pro	Val	Thr 170	Asp	His	Ser	Met	Asn 175	Val
Cys	Met	Arg	Val 180	Glu	Leu	Tyr	Gly	Cys 185	Val	Trp	Leu	Asp	Gly 190	Leu	Val
Ser	Tyr	Asn 195	Ala	Pro	Ala	Gly	Gln 200	Gln	Phe	Val	Leu	Pro 205	Gly	Gly	Ser
Ile	Ile 210	Tyr	Leu	Asn	Asp	Ser 215	Val	Tyr	Asp	Gly	Ala 220	Val	Gly	Tyr	Ser
Met 225	Thr	Glu	Gly	Leu	Gly 230	Gln	Leu	Thr	Asp	Gly 235	Val	Ser	Gly	Leu	Asp 240
Asp	Phe	Thr	Gln	Thr 245	His	Glu	Tyr	His	Val 250	Trp	Pro	Gly	Tyr	Asp 255	Tyr
Val	Gly	Trp	Arg 260	Asn	Glu	Ser	Ala	Thr 265	Asn	Gly	Tyr	Ile	Glu 270	Ile	Met
Phe	Glu	Phe 275	Asp	Arg	Ile	Arg	Asn 280	Phe	Thr	Thr	Met	Lys 285	Val	His	Cys
Asn	Asn 290	Met	Phe	Ala	Lys	Gly 295	Val	Lys	Ile	Phe	Lys 300	Glu	Val	Gln	Cys
Tyr 305	Phe	Arg	Ser	Glu	Ala 310	Ser	Glu	Trp	Glu	Pro 315	Asn	Ala	Ile	Ser	Phe 320
Pro	Leu	Val	Leu	Asp 325	Asp	Val	Asn	Pro	Ser 330	Ala	Arg	Phe	Val	Thr 335	Val
Pro	Leu	His	His 340	Arg	Met	Ala	Ser	Ala 345	Ile	Lys	Cys	Gln	Tyr 350	His	Phe
Ala	Asp	Thr 355	Trp	Met	Met	Phe	Ser 360	Glu	Ile	Thr	Phe	Gln 365	Ser	Asp	Ala
Ala	Met 370	Tyr	Asn	Asn	Ser	Glu 375	Ala	Leu	Pro	Thr	Ser 380	Pro	Met	Ala	Pro
Thr 385	Thr	Tyr	Asp	Pro	Met 390	Leu	Lys	Val	Asp	Asp 395	Ser	Asn	Thr	Arg	Ile 400
Leu	Ile	Gly	Cys	Leu 405	Val	Ala	Ile	Ile	Phe 410	Ile	Leu	Leu	Ala	Ile 415	Ile
Val	Ile	Ile	Leu	Trp	Arg	Gln	Phe	Trp	Gln	Lys	Met	Leu	Glu	Lys	Ala

Ser Arg Arg Met Leu Asp Asp Glu Met Thr Val Ser Leu Ser Leu Pro 435 440 445

Ser Asp Ser Ser Met Phe Asn Asn Asn Arg Ser Ser Pro Ser Glu
450 455 460

Gln Gly Ser Asn Ser Thr Tyr Asp Arg Ile Phe Pro Leu Arg Pro Asp 465 470 475 480

Tyr Gln Glu Pro Ser Arg Leu Ile Arg Lys Leu Pro Glu Phe Ala Pro 485 490 495

Gly Glu Glu Glu Ser Gly Glu Asp Asp Val Val Glu Gln Gly Val Lys
500 505 510

Gly Glu Thr Ser Ala Ser Ile Arg 515 520

<210> 106

<211> 284

<212> PRT

<213> Homo sapiens

<400> 106

Met Ala Asn Phe Gln Glu His Leu Ser Cys Ser Ser Ser Pro His Leu 1 5 10 15

Pro Phe Ser Glu Ser Lys Thr Phe Asn Gly Leu Gln Asp Glu Leu Thr 20 25 30

Ala Met Gly Asn His Pro Ser Pro Lys Leu Leu Glu Asp Gln Gln Glu 35 40 45

Lys Gly Met Val Arg Thr Glu Leu Ile Glu Ser Val His Ser Pro Val 50 55 60

Thr Thr Thr Val Leu Thr Ser Val Ser Glu Asp Ser Arg Asp Gln Phe 70 75 80

Glu Asn Ser Val Leu Gln Leu Arg Glu His Asp Glu Ser Glu Thr Ala 85 90 95

Val Ser Gln Gly Asn Ser Asn Thr Val Asp Gly Glu Ser Thr Ser Gly
100 105 110

Thr Glu Asp Ile Lys Ile Gln Phe Ser Arg Ser Gly Ser Gly Ser Gly 115 120 125

Gly Phe Leu Glu Gly Leu Phe Gly Cys Leu Arg Pro Val Trp Asn Ile 130 135 140

Ile Gly Lys Ala Tyr Ser Thr Asp Tyr Lys Phe Met Gln Gln Asp Thr 145 150 155 160 Trp Glu Val Pro Phe Glu Glu Ile Ser Glu Leu Gln Trp Leu Gly Ser 165 170 Gly Ala Gln Gly Ala Val Phe Leu Gly Lys Phe Arg Ala Glu Glu Val 185 Ala Ile Lys Lys Val Arg Glu Gln Asn Glu Thr Asp Ile Lys His Leu 200 Arg Lys Leu Lys His Pro Asn Ile Ile Ala Phe Lys Gly Val Cys Thr 210 215 Gln Ala Pro Cys Tyr Cys Ile Ile Met Glu Tyr Cys Ala His Gly Gln 235 Leu Tyr Glu Val Leu Arg Ala Gly Arg Lys Ile Thr Pro Arg Leu Leu 250 Val Asp Trp Ser Thr Gly Ile Ala Ser Gly Met Asn Tyr Leu His Leu His Lys Ile Ile His Arg Asp Leu Lys Ser Pro Lys 280 <210> 107 <211> 185 <212> PRT <213> Homo sapiens <400> 107 Met Cys Gly Gln Arg Trp Ile His Asn Phe Thr Cys Leu Ala Phe Leu Phe His Thr Leu Lys Ser Gly Asn Lys Ser Val His Leu Arg Lys Ala Ser Ser Pro Asn Leu His Arg Arg Gln Trp Glu Lys Asn Val Pro Asn 35 Thr Ala Leu Thr Ala Leu Glu Asn Ala Ser Ile Leu Thr Ser Ser Leu Thr Ala Glu Asp Asp Arg Gly Gly Ser Val Ile Lys Tyr Ser Lys Asn Thr Thr Arg Lys Gln Trp Leu Lys Glu Thr Pro Asp Thr Leu Leu Asn Ile Leu Lys Asn Ala Asp Leu Ser Leu Ala Phe Gln Thr Tyr Thr Ile Tyr Arg Pro Gly Ser Glu Gly Phe Leu Lys Gly Pro Leu Ser Glu Glu Thr Glu Ala Ser Asp Ser Val Asp Gly Gly His Asp Ser Val Ile Leu

135

140

130

Asp Pro Glu Arg Leu Glu Pro Gly Leu Asp Glu Glu Asp Thr Asp Phe 145 150 155 160

Glu Glu Glu Asp Asp Asp Pro Asp Trp Val Ser Glu Leu Lys Lys Arg 165 170 175

Ala Gly Trp Gln Gly Leu Cys Asp Arg 180 185

<210> 108

<211> 83

<212> PRT

<213> Homo sapiens

<400> 108

Met Ala Pro Pro Ser Glu Glu Thr Pro Leu Ile Pro Gln Arg Ser Cys
1 5 10 15

Ser Leu Leu Ser Thr Glu Ala Gly Ala Leu His Val Leu Leu Pro Ala 20 25 30

Arg Gly Pro Gly Pro Pro Gln Arg Leu Ser Phe Ser Phe Gly Val Pro 35 40 45

Val Arg Pro Val Gly Ala Asn Gly Pro Pro Leu Thr Ser Gly Phe Leu 50 55 60

Gly Gly Trp Ala Glu Ala Ser Val Gln Arg Gly Leu Trp Lys Cys Leu 65 70 75 80

Leu Thr Glu

<210> 109

<211> 213

<212> PRT

<213> Homo sapiens

<400> 109

Met Ala Glu Ser Ala Gly Ala Ser Ser Phe Phe Pro Leu Val Val Leu 1 5 10 15

Leu Leu Ala Gly Ser Gly Gly Ser Gly Pro Arg Gly Val Gln Ala Leu
20 25 30

Leu Cys Ala Cys Thr Ser Cys Leu Gln Ala Asn Tyr Thr Cys Glu Thr 35 40 45

Asp Gly Ala Cys Met Val Ser Ile Phe Asn Leu Asp Gly Met Glu His 50 60

His Val Arg Thr Cys Ile Pro Lys Val Glu Leu Val Pro Ala Gly Lys 65 70 75 80

Pro Phe Tyr Cys Leu Ser Ser Glu Asp Leu Arg Asn Thr His Cys Cys 85 90 Tyr Thr Asp Tyr Cys Asn Arg Ile Asp Leu Arg Val Pro Ser Gly His 105 Leu Lys Glu Pro Glu His Pro Ser Met Trp Gly Pro Val Glu Leu Val Gly Ile Ile Ala Gly Pro Val Phe Leu Leu Phe Leu Ile Ile Ile Ile 135 140 Val Phe Leu Val Ile Asn Tyr His Gln Arg Val Tyr His Asn Arg Gln 155 Arg Leu Asp Met Glu Asp Pro Ser Cys Glu Met Cys Leu Ser Lys Asp 165 170 175 Lys Thr Leu Gln Asp Leu Val Tyr Asp Leu Ser Thr Ser Gly Ser Gly 185 Ser Gly Thr Lys Phe Phe Arg Ala Ser Cys Leu Trp Leu Ala Phe Ile 200 Ser Phe Pro Ala Gly 210 <210> 110 <211> 383 <212> PRT <213> Homo sapiens <400> 110 Met Asp Glu Glu Ala Leu Asn Ser Ile Met Asn Asp Leu Val Ala Leu Gln Met Asn Arg Arg His Arg Met Pro Gly Tyr Glu Thr Met Lys 20 Asn Lys Asp Thr Gly His Ser Asn Arg Gln Ser Asp Val Arg Ile Lys Phe Glu His Asn Gly Glu Arg Arg Ile Ile Ala Phe Ser Arg Pro Val Lys Tyr Glu Asp Val Glu His Lys Val Thr Thr Val Phe Gly Gln Pro Leu Asp Leu His Tyr Met Asn Asn Glu Leu Ser Ile Leu Leu Lys Asn Gln Asp Asp Leu Asp Lys Ala Ile Asp Ile Leu Asp Arg Ser Ser Ser 100

Met Lys Ser Leu Arg Ile Leu Leu Leu Ser Gln Asp Arg Asn His Asn

125

120

115

Ser Ser Pro His Ser Glu Val Ser Arg Gln Val Arg Ile Lys Ala 130 135 140

Ser Gln Ser Ala Gly Asp Ile Asn Thr Ile Tyr Gln Pro Pro Glu Pro 145 150 155 160

Arg Ser Arg His Leu Ser Val Ser Ser Gln Asn Pro Gly Arg Ser Ser 165 170 175

Pro Pro Pro Gly Tyr Val Pro Glu Arg Gln Gln His Ile Ala Arg Gln
180 185 190

Gly Ser Tyr Thr Ser Ile Asn Ser Glu Gly Glu Phe Ile Pro Glu Thr 195 200 205

Ser Glu Gln Cys Met Leu Asp Pro Leu Ser Ser Ala Glu Asn Ser Leu 210 215 220

Ser Gly Ser Cys Gln Ser Leu Asp Arg Ser Ala Asp Ser Pro Ser Phe 225 230 235 240

Arg Lys Ser Arg Met Ser Arg Ala Gln Ser Phe Pro Asp Asn Arg Gln 245 250 255

Glu Tyr Ser Asp Arg Glu Thr Gln Leu Tyr Asp Lys Gly Val Lys Gly 260 265 270

Gly Thr Tyr Pro Arg Arg Tyr His Val Ser Val His His Lys Asp Tyr 275 280 285

Ser Asp Gly Arg Arg Thr Phe Pro Arg Ile Arg Arg His Gln Gly Asn 290 295 300

Leu Phe Thr Leu Val Pro Ser Ser Arg Ser Leu Ser Thr Asn Gly Glu 305 310 315 320

Asn Met Gly Leu Ala Val Gln Tyr Leu Asp Pro Arg Gly Arg Leu Arg 325 330 335

Ser Ala Asp Ser Glu Asn Ala Leu Ser Val Gln Glu Arg Asn Val Pro 340 345 350

Thr Lys Cys Glu Glu Leu Ser Leu Ala Arg Arg Arg Leu Pro Arg Trp 355 360 365

Ser Gln Thr Ser Tyr Gly Gly Lys Gln Leu Gly Pro Trp Asp Pro 370 375 380

<210> 111

<211> 414

<212> PRT

<213> Homo sapiens

<400> 111

Met Asp Glu Glu Ala Leu Asn Ser Ile Met Asn Asp Leu Val Ala

15

Leu Gln Met Asn Arg Arg His Arg Met Pro Gly Tyr Glu Thr Met Lys
20 25 30

Asn Lys Asp Thr Gly His Ser Asn Arg Gln Lys Lys His Asn Ser Ser 35 40 45

Ser Ser Ala Leu Leu Asn Ser Pro Thr Val Thr Thr Ser Ser Cys Ala 50 55 60

Gly Ala Ser Glu Lys Lys Lys Phe Leu Ser Asp Val Arg Ile Lys Phe 65 70 75 80

Glu His Asn Gly Glu Arg Arg Ile Ile Ala Phe Ser Arg Pro Val Lys 85 90 95

Tyr Glu Asp Val Glu His Lys Val Thr Thr Val Phe Gly Gln Pro Leu 100 105 110

Asp Leu His Tyr Met Asn Asn Glu Leu Ser Ile Leu Leu Lys Asn Gln
115 120 125

Asp Asp Leu Asp Lys Ala Ile Asp Ile Leu Asp Arg Ser Ser Met 130 135 140

Lys Ser Leu Arg Ile Leu Leu Ser Gln Asp Arg Asn His Asn Ser 145 150 155 160

Ser Ser Pro His Ser Glu Val Ser Arg Gln Val Arg Ile Lys Ala Ser 165 170 175

Gln Ser Ala Gly Asp Ile Asn Thr Ile Tyr Gln Pro Pro Glu Pro Arg 180 185 190

Ser Arg His Leu Ser Val Ser Ser Gln Asn Pro Gly Arg Ser Ser Pro 195 200 205

Pro Pro Gly Tyr Val Pro Glu Arg Gln Gln His Ile Ala Arg Gln Gly 210 215 220

Ser Tyr Thr Ser Ile Asn Ser Glu Gly Glu Phe Ile Pro Glu Thr Ser 225 230 235 240

Glu Gln Cys Met Leu Asp Pro Leu Ser Ser Ala Glu Asn Ser Leu Ser 245 250 255

Gly Ser Cys Gln Ser Leu Asp Arg Ser Ala Asp Ser Pro Ser Phe Arg 260 265 270

Lys Ser Arg Met Ser Arg Ala Gln Ser Phe Pro Asp Asn Arg Gln Glu 275 280 285

Tyr Ser Asp Arg Glu Thr Gln Leu Tyr Asp Lys Gly Val Lys Gly Gly 290 295 300

Thr Tyr Pro Arg Arg Tyr His Val Ser Val His His Lys Asp Tyr Ser

Asp Gly Arg Arg Thr Phe Pro Arg Ile Arg Arg His Gln Gly Asn Leu 325 330 335

Phe Thr Leu Val Pro Ser Ser Arg Ser Leu Ser Thr Asn Gly Glu Asn 340 345 350

Met Gly Leu Ala Val Gln Tyr Leu Asp Pro Arg Gly Arg Leu Arg Ser 355 360 365

Ala Asp Ser Glu Asn Ala Leu Ser Val Gln Glu Arg Asn Val Pro Thr 370 375 380

Lys Cys Glu Glu Leu Ser Leu Ala Arg Arg Leu Pro Arg Trp Ser 385 390 395 400

Gln Thr Ser Tyr Gly Gly Lys Gln Leu Gly Pro Trp Asp Pro 405 410

<210> 112

<211> 201

<212> PRT

<213> Homo sapiens

<400> 112

Met Ala Lys Gln Tyr Asp Ser Val Glu Cys Pro Phe Cys Asp Glu Val

5 10 15

Ser Lys Tyr Glu Lys Leu Ala Lys Ile Gly Gln Gly Thr Phe Gly Glu 20 25 30

Val Phe Lys Ala Arg His Arg Lys Thr Gly Gln Lys Val Ala Leu Lys 35 40 45

Lys Val Leu Met Glu Asn Glu Lys Glu Gly Phe Pro Ile Thr Ala Leu 50 55 60

Arg Glu Ile Lys Ile Leu Gln Leu Leu Lys His Glu Asn Val Val Asn 65 70 75 80

Leu Ile Glu Ile Cys Arg Thr Lys Ala Ser Pro Tyr Asn Arg Cys Lys 85 90 95

Gly Ser Ile Tyr Leu Val Phe Asp Phe Cys Glu His Asp Leu Ala Gly
100 105 110

Leu Leu Ser Asn Val Leu Val Lys Phe Thr Leu Ser Glu Ile Lys Arg 115 120 125

Val Met Gln Met Leu Leu Asn Gly Leu Tyr Tyr Asn His Asp Phe Phe 130 135 140

Trp Ser Asp Pro Met Pro Ser Asp Leu Lys Gly Met Leu Ser Thr His 145 150 155 160 Leu Thr Ser Met Phe Glu Tyr Leu Ala Pro Pro Arg Arg Lys Gly Ser 165 170 175

Gln Ile Thr Gln Gln Ser Thr Asn Gln Ser Arg Asn Pro Ala Thr Thr 180 185 190

Asn Gln Thr Glu Phe Glu Arg Val Phe 195 200

<210> 113

<211> 125

<212> PRT

<213> Homo sapiens

<400> 113

Met Ala Thr Ser Arg Tyr Glu Pro Val Ala Glu Ile Gly Val Gly Ala
1 5 10 15

Tyr Gly Thr Val Tyr Lys Ala Arg Asp Pro His Ser Gly His Phe Cys
20 25 30

Ala Leu Lys Ser Val Arg Val Pro Asn Gly Gly Gly Gly Gly Gly Gly 35 40 45

Leu Pro Ile Ser Thr Val Arg Glu Val Ala Leu Leu Arg Arg Leu Glu
50 60

Ala Phe Glu His Pro Asn Val Val Arg Leu Met Asp Val Cys Ala Thr 65 70 75 80

Ser Arg Thr Asp Arg Glu Ile Lys Val Thr Leu Val Phe Glu His Val 85 90 95

Asp Gln Asp Leu Arg Thr Tyr Leu Asp Lys Ala Pro Pro Pro Gly Leu 100 105 110

Pro Ala Glu Thr Ile Lys Val Ser Gly Val Gly Arg His 115 120 125

<210> 114

<211> 45

<212> PRT

<213> Homo sapiens

<400> 114

Met Ala Thr Ser Arg Tyr Glu Pro Val Ala Glu Ile Gly Val Gly Ala
1 5 10 15

Tyr Gly Thr Val Tyr Lys Ala Arg Asp Pro His Ser Gly His Phe Cys
20 25 30

Ala Leu Lys Ser Val Arg Val Pro Thr His Leu Ser Phe 35 40 45

<210> 115

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<211> 160
<212> PRT
<213> Homo sapiens
<400> 115
Met Gly Val Cys Pro Gly Lys Thr Pro Phe Cys Ser Pro Lys Pro Gln
               5
Gly Leu Ala Arg Gly His Trp Ser Arg Arg Arg Asp Ile Cys Val Thr
Gly Pro Leu Pro Leu Glu Pro Arg Ala Val Tyr Cys Lys Asp Val Leu
Asp Ile Glu Gln Phe Ser Thr Val Lys Gly Val Asn Leu Asp His Thr
Asp Asp Asp Phe Tyr Ser Lys Phe Ser Thr Gly Ser Val Ser Ile Pro
Trp Gln Asn Glu Met Ile Glu Thr Glu Cys Phe Lys Glu Leu Asn Val
Phe Gly Pro Asn Gly Thr Leu Pro Pro Asp Leu Asn Arg Asn His Pro
Pro Glu Pro Pro Lys Lys Gly Leu Leu Gln Arg Leu Phe Lys Arg Gln
His Gln Asn Asn Ser Lys Ser Ser Pro Ser Ser Lys Thr Ser Phe Asn
    130
                        135
                                            140
His His Ile Asn Ser Asn His Val Ser Ser Asn Ser Thr Gly Ser Ser
                    150
                                        155
<210> 116
<211> 300
<212> PRT
<213> Homo sapiens
<220>
<221> -
<222> (1)..(300)
<223> "XAA" can be any amino acid
<400> 116
Met Pro Arg Ala Arg Met Pro Xaa Pro Arg Ala His Ser Lys Ala Gly
Cys Pro Cys Gly Cys Pro Arg Asp Pro Leu Thr Leu Leu Ser Pro Ser
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Gly His Ile Arg Ile Ser Asp Leu Gly Leu Ala Val Lys Ile Pro Glu

Gly Asp Leu Ile Arg Gly Arg Val Gly Thr Val Gly Tyr Met Ala Pro 50 55 60

Glu Val Leu Asn Asn Gln Arg Tyr Gly Leu Ser Pro Asp Tyr Trp Gly 65 70 75 80

Leu Gly Cys Leu Ile Tyr Glu Met Ile Glu Gly Gln Ser Pro Phe Arg 85 90 95

Gly Arg Lys Glu Lys Val Lys Arg Glu Glu Val Asp Arg Arg Val Leu 100 105 110

Glu Thr Glu Glu Val Tyr Ser His Lys Phe Ser Glu Glu Ala Lys Ser 115 120 125

Ile Cys Lys Met Leu Leu Thr Lys Asp Ala Lys Gln Arg Leu Gly Cys 130 135 140

Gln Glu Glu Gly Ala Ala Glu Val Lys Arg His Pro Phe Phe Arg Asn 145 150 155 160

Met Asn Phe Lys Arg Leu Glu Ala Gly Met Leu Asp Pro Pro Phe Val 165 170 175

Pro Asp Pro Arg Ala Val Tyr Cys Lys Asp Val Leu Asp Ile Glu Gln 180 185 190

Phe Ser Thr Val Lys Gly Val Asn Leu Asp His Thr Asp Asp Asp Phe 195 200 205

Tyr Ser Lys Phe Ser Thr Gly Ser Val Ser Ile Pro Trp Gln Asn Glu 210 215 220

Met Ile Glu Thr Glu Cys Phe Lys Glu Leu Asn Val Phe Gly Pro Asn 225 230 235 240

Gly Thr Leu Pro Pro Asp Leu Asn Arg Asn His Pro Pro Glu Pro Pro 245 250 255

Lys Lys Gly Leu Leu Gln Arg Leu Phe Lys Arg Gln His Gln Asn Asn 260 265 270

Ser Lys Ser Ser Pro Ser Ser Lys Thr Ser Phe Asn His His Ile Asn 275 280 285

Ser Asn His Val Ser Ser Asn Ser Thr Gly Ser Ser 290 295 300

<210> 117

<211> 169

<212> PRT

<213> Homo sapiens

<220>

<221>

<222> (1)..(169)

<223> "XAA" can be any amino acid

<400> 117

Met Arg Met Pro Arg Ala Arg Met Pro Xaa Pro Arg Ala His Ser Lys
1 10 15

Ala Gly Cys Pro Cys Gly Cys Pro Arg Asp Pro Leu Thr Leu Leu Ser 20 25 30

Pro Ser Gly His Ile Arg Ile Ser Asp Leu Gly Leu Ala Val Lys Ile 35 40 45

Pro Glu Gly Asp Leu Ile Arg Gly Arg Val Gly Thr Val Gly Tyr Met 50 55 60

Ala Pro Glu Val Leu Asn Asn Gln Arg Tyr Gly Leu Ser Pro Asp Tyr 65 70 75 80

Trp Gly Leu Gly Cys Leu Ile Tyr Glu Met Ile Glu Gly Gln Ser Pro 85 90 95

Phe Arg Gly Arg Lys Glu Lys Val Lys Arg Glu Glu Val Asp Arg Arg
100 105 110

Val Leu Glu Thr Glu Glu Val Tyr Ser His Lys Phe Ser Glu Glu Ala 115 120 125

Lys Ser Ile Cys Lys Met Val Ser Ser Trp Trp Pro Asp Ala Thr Leu 130 135 140

Lys Leu Val Ala Pro Ser Leu Gly Leu Ala Pro Val Cys Pro Gln Asn 145 150 155 160

Ser Lys Gln Ala Glu Gly Thr Gly Val 165

<210> 118

<211> 319

<212> PRT

<213> Homo sapiens

<400> 118

Met Ala Pro Phe Leu Arg Ile Ala Phe Asn Ser Tyr Glu Leu Gly Ser
1 5 10 15

Leu Gln Ala Glu Asp Glu Ala Asn Gln Pro Phe Cys Ala Val Lys Met 20 25 30

Lys Glu Ala Leu Ser Thr Glu Arg Gly Lys Thr Leu Val Gln Lys Lys 35 40 45

Pro Thr Met Tyr Pro Glu Trp Lys Ser Thr Phe Asp Ala His Ile Tyr 50 55 60

Glu Gly Arg Val Ile Gln Ile Val Leu Met Arg Ala Ala Glu Glu Pro Val Ser Glu Val Thr Val Gly Val Ser Val Leu Ala Glu Arg Cys Lys 90 Lys Asn Asn Gly Lys Ala Glu Phe Trp Leu Asp Leu Gln Pro Gln Ala 105 Lys Val Leu Met Ser Val Gln Tyr Phe Leu Glu Asp Val Asp Cys Lys 120 Gln Ser Met Arg Ser Glu Asp Glu Ala Lys Phe Pro Thr Met Asn Arg 135 Arg Gly Ala Ile Lys Gln Ala Lys Ile His Tyr Ile Lys Asn His Glu 145 Phe Ile Ala Thr Phe Phe Gly Gln Pro Thr Phe Cys Ser Val Cys Lys 165 170 Asp Phe Val Trp Gly Leu Asn Lys Gln Gly Tyr Lys Cys Arg Gln Cys 185 Asn Ala Ala Ile His Lys Lys Cys Ile Asp Lys Ile Ile Gly Arg Cys 195 Thr Gly Thr Ala Ala Asn Ser Arg Asp Thr Ile Phe Gln Lys Glu Arg Phe Asn Ile Asp Met Pro His Arg Phe Lys Val His Asn Tyr Met Ser 225 230 Pro Thr Phe Cys Asp His Cys Gly Ser Leu Leu Pro Ala Pro His Asp Lys His Gln Trp Asp Cys Gly Asp Phe Cys Cys Trp Pro Arg Pro 265 Cys Pro Gln Ser Val Leu Gly Cys Arg Leu Ala Gly Leu Ser Trp Tyr 275 Phe Leu Cys Glu Leu Cys Val Asn Leu Leu Phe Leu Cys Leu Arg Arg Glu Ile Val Asn Pro Val Phe His Tyr Leu Asn Val Val Ile Tyr 310 <210> 119 <211> 236 <212> PRT <213> Homo sapiens <400> 119 Met Asp Glu Thr His Pro Gly Tyr Gly Lys Glu Val Asp Leu Glu Phe

10

Leu Val Ser Pro Ser Leu Pro Cys Leu Leu Ser Phe Ala Gly Ser Ala 20 25 30

Arg His Leu Val Pro Pro Asp Ser Asn Leu Phe Ser Lys Leu Trp Ala 35 40 45

Cys Gly Val Ile Leu Phe Thr Leu Leu Ala Gly Ser Pro Pro Phe Trp 50 55 60

His Arg Arg Gln Ile Leu Met Leu Arg Met Ile Met Glu Gly Gln Tyr 65 70 75 80

Gln Phe Ser Ser Pro Glu Trp Asp Asp Arg Ser Ser Thr Val Lys Asp 85 90 95

Leu Ile Ser Arg Leu Leu Gln Val Asp Pro Glu Ala Arg Leu Thr Ala 100 105 110

Glu Gln Ala Leu Gln His Pro Phe Phe Glu Arg Cys Glu Gly Ser Gln 115 120 125

Pro Trp Asn Leu Thr Pro Arg Gln Arg Phe Arg Val Ala Val Trp Thr 130 135 140

Val Leu Ala Ala Gly Arg Val Ala Leu Ser Thr His Arg Val Arg Pro 145 150 155 160

Leu Thr Lys Asn Ala Leu Leu Arg Asp Pro Tyr Ala Leu Arg Ser Val 165 170 175

Arg His Leu Ile Asp Asn Cys Ala Phe Arg Leu Tyr Gly His Trp Val 180 185 190

Lys Lys Gly Glu Gln Gln Asn Arg Ala Ala Leu Phe Gln His Arg Pro 195 200 205

Pro Gly Pro Phe Pro Ile Met Gly Pro Glu Glu Glu Gly Asp Ser Ala 210 215 220

Ala Ile Thr Glu Asp Glu Ala Val Leu Val Leu Gly
225 230 235

<210> 120

<211> 572

<212> PRT

<213> Homo sapiens

<400> 120

Met Ala Phe Cys Ala Lys Met Arg Ser Ser Lys Lys Thr Glu Val Asn
1 5 10 15

Leu Glu Ala Pro Glu Pro Gly Val Glu Val Ile Phe Tyr Leu Ser Asp 20 25 30

Arg Glu Pro Leu Arg Leu Gly Ser Gly Glu Tyr Thr Ala Glu Glu Leu

Cys Ile Arg Ala Ala Gln Ala Cys Arg Ile Ser Pro Leu Cys His Asn

45

Leu Phe Ala Leu Tyr Asp Glu Asn Thr Lys Leu Trp Tyr Ala Pro Asn

40

Arg Thr Ile Thr Val Asp Asp Lys Met Ser Leu Arg Leu His Tyr Arg 90

Met Arg Phe Tyr Phe Thr Asn Trp His Gly Thr Asn Asp Asn Glu Gln 100

Ser Val Trp Arg His Ser Pro Lys Lys Gln Lys Asn Gly Tyr Glu Lys

Lys Lys Ile Pro Asp Ala Thr Pro Leu Leu Asp Ala Ser Ser Leu Glu 130 135

Tyr Leu Phe Ala Gln Gly Gln Tyr Asp Leu Val Lys Cys Leu Ala Pro

Ile Arq Asp Pro Lys Thr Glu Gln Asp Gly His Asp Ile Glu Asn Glu

Cys Leu Gly Met Ala Val Leu Ala Ile Ser His Tyr Ala Met Met Lys

Lys Met Gln Leu Pro Glu Leu Pro Lys Asp Ile Ser Tyr Lys Arg Tyr 200

Ile Pro Glu Thr Leu Asn Lys Ser Ile Arg Gln Arg Asn Leu Leu Thr 215

Arg Met Arg Ile Asn Asn Val Phe Lys Asp Phe Leu Lys Glu Phe Asn 225 230

Asn Lys Thr Ile Cys Asp Ser Ser Val Ser Thr His Asp Leu Lys Val 250

Lys Tyr Leu Ala Thr Leu Glu Thr Leu Thr Lys His Tyr Gly Ala Glu 260 270

Ile Phe Glu Thr Ser Met Leu Leu Ile Ser Ser Glu Asn Glu Met Asn 275 280

Trp Phe His Ser Asn Asp Gly Gly Asn Val Leu Tyr Tyr Glu Val Met 295

Val Thr Gly Asn Leu Gly Ile Gln Trp Arg His Lys Pro Asn Val Val 305 310

Ser Val Glu Lys Glu Lys Asn Lys Leu Lys Arg Lys Leu Glu Asn 330 325

Lys Asp Lys Lys Asp Glu Glu Lys Asn Lys Ile Arg Glu Glu Trp Asn

340 345 350

Asn Phe Ser Phe Phe Pro Glu Ile Thr His Ile Val Ile Lys Glu Ser 355 360 365

Val Val Ser Ile Asn Lys Gln Asp Asn Lys Lys Met Glu Leu Lys Leu 370 380

Ser Ser His Glu Glu Ala Leu Ser Phe Val Ser Leu Val Asp Gly Tyr 385 390 395 400

Phe Arg Leu Thr Ala Asp Ala His His Tyr Leu Cys Thr Asp Val Ala
405 410 415

Pro Pro Leu Ile Val His Asn Ile Gln Asn Gly Cys His Gly Pro Ile 420 425 430

Cys Thr Glu Tyr Ala Ile Asn Lys Leu Arg Gln Glu Gly Ser Glu Glu 435 440 445

Gly Met Tyr Val Leu Arg Trp Ser Cys Thr Asp Phe Asp Asn Ile Leu 450 455 460

Met Thr Val Thr Cys Phe Glu Lys Ser Glu Gln Val Gln Gly Ala Gln 465 470 475 480

Lys Gln Phe Lys Asn Phe Gln Ile Glu Val Gln Lys Gly Arg Tyr Ser 485 490 495

Leu His Gly Ser Asp Arg Ser Phe Pro Ser Leu Gly Asp Leu Met Ser 500 505 510

His Leu Lys Lys Gln Ile Leu Arg Thr Asp Asn Ile Ser Phe Met Leu 515 520 525

Lys Arg Cys Cys Gln Pro Lys Pro Arg Gly Ser Leu Pro Val Pro Glu 530 540

Pro Gly Cys Ile Pro Ser Val Ile Ala Glu Thr Gln Ile Asp Gln Asn 545 550 555 560

Thr Leu Thr Asp Leu Asn Lys Val Asp Pro Pro Pro 565 570

<210> 121

<211> 311

<212> PRT

<213> Homo sapiens

<400> 121

Met Gly Cys Val Gln Cys Lys Asp Lys Glu Ala Thr Lys Leu Thr Glu
1 5 10 15

Glu Arg Asp Gly Ser Leu Asn Gln Ser Ser Gly Tyr Arg Tyr Gly Thr
20 25 30

Asp Pro Thr Pro Gln His Tyr Pro Ser Phe Gly Val Thr Ser Ile Pro 35 40 45

Asn Tyr Asn Asn Phe His Ala Ala Gly Gly Gln Gly Leu Thr Val Phe 50 55 60

Gly Gly Val Asn Ser Ser Ser His Thr Gly Thr Leu Arg Thr Arg Gly 65 70 75 80

Gly Thr Gly Val Thr Leu Phe Val Ala Leu Tyr Asp Tyr Glu Ala Arg 85 90 95

Thr Glu Asp Asp Leu Ser Phe His Lys Gly Glu Lys Phe Gln Ile Leu 100 105 110

Asn Ser Ser Glu Gly Asp Trp Trp Glu Ala Arg Ser Leu Thr Thr Gly
115 120 125

Glu Thr Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Val Asp Ser Ile 130 135 140

Gln Ala Glu Glu Trp Tyr Phe Gly Lys Leu Gly Arg Lys Asp Ala Glu 145 150 155 160

Arg Gln Leu Leu Ser Phe Gly Asn Pro Arg Gly Thr Phe Leu Ile Arg 165 170 175

Glu Ser Glu Thr Thr Lys Gly Ala Tyr Ser Leu Ser Ile Arg Asp Trp 180 185 190

Asp Asp Met Lys Gly Asp His Val Lys His Tyr Lys Ile Arg Lys Leu 195 200 205

Asp Asn Gly Gly Tyr Tyr Ile Thr Thr Arg Ala Gln Phe Glu Thr Leu 210 215 220

Gln Gln Leu Val Gln His Tyr Ser Glu Arg Ala Ala Gly Leu Cys Cys 225 230 235 240

Arg Leu Val Val Pro Cys His Lys Gly Met Pro Arg Leu Thr Asp Leu 245 250 255

Ser Val Lys Thr Lys Asp Val Trp Glu Ile Pro Arg Glu Ser Leu Gln 260 265 270

Leu Ile Lys Arg Leu Gly Asn Gly Gln Phe Gly Glu Val Trp Met Gly 275 280 285

Met Leu Arg Leu Asn Tyr Ser Leu Ile Ser Phe Pro Val Trp Lys Ile 290 295 300

Pro Asn Thr Lys Asp Gly Arg 305 310

<210> 122

<211> 387

<212> PRT

<213> Homo sapiens

<400> 122

Met Gly Cys Val Gln Cys Lys Asp Lys Glu Ala Thr Lys Leu Thr Glu 1 5 10 15

Glu Arg Asp Gly Ser Leu Asn Gln Ser Ser Gly Tyr Arg Tyr Gly Thr
20 25 30

Asp Pro Thr Pro Gln His Tyr Pro Ser Phe Gly Val Thr Ser Ile Pro 35 40 45

Asn Tyr Asn Asn Phe His Ala Ala Gly Gly Gln Gly Leu Thr Val Phe 50 55 60

Gly Gly Val Asn Ser Ser Ser His Thr Gly Thr Leu Arg Thr Arg Gly 65 70 75 80

Gly Thr Gly Val Thr Leu Phe Val Ala Leu Tyr Asp Tyr Glu Ala Arg 85 90 95

Thr Glu Asp Asp Leu Ser Phe His Lys Gly Glu Lys Phe Gln Ile Leu 100 105 110

Asn Ser Ser Glu Gly Asp Trp Trp Glu Ala Arg Ser Leu Thr Thr Gly
115 120 125

Glu Thr Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Val Asp Ser Ile 130 135 140

Gln Ala Glu Glu Trp Tyr Phe Gly Lys Leu Gly Arg Lys Asp Ala Glu 145 150 155 160

Arg Gln Leu Leu Ser Phe Gly Asn Pro Arg Gly Thr Phe Leu Ile Arg 165 170 175

Glu Ser Glu Thr Thr Lys Gly Ala Tyr Ser Leu Ser Ile Arg Asp Trp 180 185 190

Asp Asp Met Lys Gly Asp His Val Lys His Tyr Lys Ile Arg Lys Leu 195 200 205

Asp Asn Gly Gly Tyr Tyr Ile Thr Thr Arg Ala Gln Phe Glu Thr Leu 210 215 220

Gln Gln Leu Val Gln His Tyr Ser Glu Arg Ala Ala Gly Leu Cys Cys 225 230 235 240

Arg Leu Val Val Pro Cys His Lys Gly Met Pro Arg Leu Thr Asp Leu 245 250 255

Ser Val Lys Thr Lys Asp Val Trp Glu Ile Pro Arg Glu Ser Leu Gln 260 265 270

Leu Ile Lys Arg Leu Gly Asn Gly Gln Phe Gly Glu Val Trp Met Gly
275 280 285

Thr Trp Asn Gly Asn Thr Lys Val Ala Ile Lys Thr Leu Lys Pro Gly
290 295 300

Thr Met Ser Pro Glu Ser Phe Leu Glu Glu Ala Gln Ile Met Lys Lys 305 310 315 320

Leu Lys His Asp Lys Leu Val Gln Leu Tyr Ala Val Val Ser Glu Glu
325 330 335

Pro Ile Tyr Ile Val Thr Glu Tyr Met Asn Lys Gly Trp Ala Thr Pro 340 345 350

Leu Leu Ser Pro Ala His Ser Ala Leu Arg Gly Cys Leu Gly Glu Arg 355 360 365

Asn Gly Ser Phe Leu Leu Ala Thr Phe Leu Val Ser Ala Trp Val Lys 370 375 380

Tyr Ser His 385

<210> 123

<211> 516

<212> PRT

<213> Homo sapiens

<400> 123

Met Arg Leu Glu Leu Pro Ala Gly His Trp Glu Arg Pro Asp Leu Glu
1 5 10 15

Leu Leu Glu Lys Ser Thr Gln Gln Gly Arg Ala Trp Asp Leu Glu Leu 20 25 30

Leu Glu Lys Gly Ala Gly Ser Leu Pro Leu Tyr Val Trp Lys Val Ser 35 40 45

Leu Ser Leu Leu Glu Leu His Lys Arg Arg Lys Ala Leu Thr Glu Pro 50 55 60

Glu Ala Arg Tyr Tyr Leu Arg Gln Ile Val Leu Gly Cys Gln Tyr Leu 65 70 75 80

His Arg Asn Arg Val Ile His Arg Asp Leu Lys Leu Gly Asn Leu Phe 85 90 95

Leu Asn Glu Asp Leu Glu Val Lys Ile Gly Asp Phe Gly Leu Ala Thr 100 105 110

Lys Val Glu Tyr Asp Gly Glu Arg Lys Lys Thr Leu Cys Gly Thr Pro 115 120 125

Asn Tyr Ile Ala Pro Glu Val Leu Ser Lys Lys Gly His Ser Phe Glu 130 135 140

Val Asp Val Trp Ser Ile Gly Cys Ile Met Tyr Thr Leu Leu Val Gly

Ser Leu Ile Gln Lys Met Leu Gln Thr Asp Pro Thr Ala Arg Pro Thr 195 200 205

Ile Asn Glu Leu Leu Asn Asp Glu Phe Phe Thr Ser Gly Tyr Ile Pro 210 215 220

Ala Arg Leu Pro Ile Thr Cys Leu Thr Ile Pro Pro Arg Phe Ser Ile 225 230 235 240

Ala Pro Ser Ser Leu Asp Pro Ser Asn Arg Lys Pro Leu Thr Val Leu 245 250 255

Asn Lys Gly Leu Glu Asn Pro Leu Pro Glu Arg Pro Arg Glu Lys Glu 260 265 270

Glu Pro Val Val Arg Glu Thr Gly Glu Val Val Asp Cys His Leu Ser 275 280 285

Asp Met Leu Gln Gln Leu His Ser Val Asn Ala Ser Lys Pro Ser Glu 290 295 300

Arg Gly Leu Val Arg Gln Glu Glu Ala Glu Asp Pro Ala Cys Ile Pro 305 310 315 320

Ile Phe Trp Val Ser Lys Trp Val Asp Tyr Ser Asp Lys Tyr Gly Leu 325 330 335

Gly Tyr Gln Leu Cys Asp Asn Ser Val Gly Val Leu Phe Asn Asp Ser 340 345 350

Thr Arg Leu Ile Leu Tyr Asn Asp Gly Asp Ser Leu Gln Tyr Ile Glu 355 360 365

Arg Asp Gly Thr Glu Ser Tyr Leu Thr Val Ser Ser His Pro Asn Ser 370 375 380

Leu Met Lys Lys Ile Thr Leu Leu Lys Tyr Phe Arg Asn Tyr Met Ser 385 390 395 400

Glu His Leu Leu Lys Ala Gly Ala Asn Ile Thr Pro Arg Glu Gly Asp 405 410 415

Glu Leu Ala Arg Leu Pro Tyr Leu Arg Thr Trp Phe Arg Thr Arg Ser 420 425 430

Ala Ile Ile Leu His Leu Ser Asn Gly Ser Val Gln Ile Asn Phe Phe
435 440 445

Gln Asp His Thr Lys Leu Ile Leu Cys Pro Leu Met Ala Ala Val Thr

450 455 460

Tyr Ile Asp Glu Lys Arg Asp Phe Arg Thr Tyr Arg Leu Ser Leu Leu 465 470 475 480

Glu Glu Tyr Gly Cys Cys Lys Glu Leu Ala Ser Arg Leu Arg Tyr Ala 485 490 495

Arg Thr Met Val Asp Lys Leu Leu Ser Ser Arg Ser Ala Ser Asn Arg 500 505 510

Leu Lys Ala Ser 515

<210> 124

<211> 171

<212> PRT

<213> Homo sapiens

<220>

<221>

<222> (1)..(171)

<223> "XAA" can be any amino acid

<400> 124

Met Ala Leu Leu Pro Pro Phe Leu Ala Ser His Arg Leu Glu Val Ser 1 5 10 15

Arg Asp Ser Gly Trp Leu Gly Gln Cys Trp Leu Gln Gly Val Trp Glu 20 25 30

Arg Xaa Pro His Ser Gly Leu Leu Tyr Pro Leu Gln His Pro Pro Ala 35 40 45

Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp Asp 50 55 60

Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe His 70 75 80

Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu Lys 85 90 95

Phe Gly Ala Ser Ser Ser Gln Ala Gln Pro Arg Asp Ser Pro Met Thr 100 105 110

Ala Lys Gly Pro Phe Cys Pro Arg Pro Cys Pro Cys Ala Gly Pro Thr 115 120 125

Tyr Ser Pro Thr Tyr Trp Cys Pro Ala Pro Leu Gly Thr Gln Ser Pro 130 135 140

Pro Asp Arg Pro Val Glu Glu Val Glu Glu Leu Ser Pro Gln Asn Tyr 145 150 155 160 Trp Pro Val Val Trp Thr Pro Gly Pro His Phe <210> 125 <211> 134 <212> PRT <213> Homo sapiens <400> 125 Met Ala Leu Leu Pro Pro Phe Leu Ala Ser His Arq Leu Glu Val Ser Arg Asp Ser Gly Trp Leu Gly Gln Cys Trp Leu Gln Gly Val Trp Glu 20 Arg Gly Leu Thr Val Ala Phe Ser Ile Leu Cys Asn Thr Leu Gln Pro Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp Asp Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe His Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu Lys Phe Gly Ala Ser Ser Ser Gln Ala Gln Pro Arg Asp Ser Pro Met Thr 100 110 Ala Lys Gly Pro Phe Cys Pro Arg Pro Cys Pro Cys Ala Gly Pro Thr 120 115 Tyr Ser Pro Thr Tyr Trp 130 <210> 126 <211> 233 <212> PRT <213> Homo sapiens <400> 126

Met Ala Leu Leu Pro Pro Phe Leu Ala Ser His Arg Leu Glu Val Ser 1 5 10 15

Arg Asp Ser Gly Trp Leu Gly Gln Cys Trp Leu Gln Gly Val Trp Glu 20 25 30

Arg Gly Leu Thr Val Ala Phe Ser Ile Leu Cys Asn Thr Leu Gln Pro 35 40 45

Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp Asp 50 55 60

Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe His

Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu Lys
85 90 95

Phe Gly Gly Pro Leu Ser Cys Gln Pro Pro Ala Leu Pro Cys Gly Arg
100 105 110

Pro Gln Asp Glu Leu Gly Cys Ser Pro Glu Ser Arg Gly Cys Gly Pro 115 120 125

Gly Ala Ala Arg Thr Arg Thr Arg Gly Glu Asp Gly Ala Ala Thr Gly
130 135 140

Val Arg Asp Pro Ser Pro Ala Pro Trp Pro Thr His Gly Gly His Cys 145 150 155 160

Gln Pro Ala Pro Gln Cys Arg Arg Ala Arg Gly Phe His Ala Ser Leu 165 170 175

Pro His Pro Ala Gly Trp Gln Tyr Phe Ser Gln Ser Asp Leu Ala Gly 180 185 190

Arg Pro Gly Glu Glu Gly Glu Tyr Glu Ala Ala Gln Gly Cys Ala Arg 195 200 205

Gln Arg Leu Leu Arg Pro His Trp Ala Ala Arg Gly Leu Pro Asp 210 215 220

Pro Ser Leu Thr Asp Lys Cys Ala Ile 225 230

<210> 127

65

<211> 243

<212> PRT

<213> Homo sapiens

<400> 127

Met Ala Ala Glu Leu Asn Lys Asn Lys Lys Ala Arg Ala Ala Glu Ala 1 5 10 15

Ala Arg Ala Ala Glu Ala Ala Lys Ala Ala Glu Ala Thr Lys Ala Ala 20 25 30

Glu Ala Ala Ala Lys Ala Ala Lys Ala Ser Asn Thr Ser Thr Pro Thr 35 40 45

Lys Gly Asn Thr Glu Thr Ser Ala Ser Ala Ser Gln Thr Asn His Val 50 55 60

Lys Asp Val Lys Lys Ile Lys Ile Glu His Ala Pro Ser Pro Ser Ser 65 70 75 80

Gly Gly Thr Leu Lys Asn Asp Lys Ala Lys Thr Lys Pro Pro Leu Gln 85 90 95

Val Thr Lys Val Glu Asn Asn Leu Ile Val Asp Lys Ala Thr Lys Lys Ala Val Ile Val Gly Lys Glu Ser Lys Ser Ala Ala Thr Lys Glu Glu 120 Ser Val Ser Leu Lys Glu Lys Thr Lys Pro Leu Thr Pro Ser Ile Gly Ala Lys Glu Lys Glu Gln His Val Ala Leu Val Thr Ser Thr Leu Pro 150 155 Pro Leu Pro Leu Pro Pro Met Leu Pro Glu Asp Lys Glu Ala Asp Ser 170 Leu Arg Gly Asn Ile Ser Val Lys Ala Val Lys Lys Glu Val Glu Lys Lys Leu Arg Cys Leu Leu Ala Asp Leu Pro Leu Pro Glu Leu Pro 200 Gly Gly Asp Asp Leu Ser Lys Ser Pro Glu Glu Lys Lys Thr Ala Thr 215 Gln Leu His Ser Lys Arg Arg Pro Lys Tyr Val Leu Ala Phe Tyr Leu 230 Leu Leu Asn <210> 128 <211> 330 <212> PRT <213> Homo sapiens <400> 128 Met Ser Ala Lys Val Arg Leu Lys Lys Leu Glu Gln Leu Leu Leu Asp Gly Pro Trp Arg Asn Glu Ser Ala Leu Ser Val Glu Thr Leu Leu Asp Val Leu Val Cys Leu Tyr Thr Glu Cys Ser His Ser Ala Leu Arg Arg Asp Lys Tyr Val Ala Glu Phe Leu Glu Trp Ala Lys Pro Phe Thr Gln

Leu Val Lys Glu Met Gln Leu His Arg Glu Asp Phe Glu Ile Ile Lys

Val Ile Gly Arg Gly Ala Phe Gly Glu Val Ala Val Lys Met Lys

Asn Thr Glu Arg Ile Tyr Ala Met Lys Ile Leu Asn Lys Trp Glu Met

105

85

100

Leu Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val Leu 115 120 125

Val Asn Gly Asp Cys Gln Trp Ile Thr Ala Leu His Tyr Ala Phe Gln 130 135 140

Asp Glu Asn His Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly Asp 145 150 155 160

Leu Leu Thr Leu Leu Ser Lys Phe Glu Asp Lys Leu Pro Glu Asp Met 165 170 175

Ala Arg Phe Tyr Ile Gly Glu Met Val Leu Ala Ile Asp Ser Ile His 180 185 190

Gln Leu His Tyr Val His Arg Asp Ile Lys Pro Asp Asn Val Leu Leu 195 200 205

Asp Val Asn Gly His Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu Lys 210 215 220

Met Asn Asp Asp Gly Thr Val Gln Ser Ser Val Ala Val Gly Thr Pro 225 230 235 240

Asp Tyr Ile Ser Pro Glu Ile Leu Gln Ala Met Glu Asp Gly Met Gly 245 250 255

Lys Tyr Gly Pro Glu Cys Asp Trp Trp Ser Leu Gly Val Cys Met Tyr 260 265 270

Glu Met Leu Tyr Gly Glu Thr Pro Phe Tyr Ala Glu Ser Leu Val Glu 275 280 285

Thr Tyr Gly Lys Ile Met Asn His Glu Glu Arg Phe Gln Phe Pro Ser 290 295 300

His Val Thr Asp Val Ser Glu Glu Ala Lys Asp Leu Ile Gln Arg Leu 305 310 315 320

Ser Cys Ile Gln Arg Thr Pro Tyr Leu Gln 325 330

<210> 129

<211> 246

<212> PRT

<213> Homo sapiens

<400> 129

Met Ser Ala Lys Val Arg Leu Lys Lys Leu Glu Gln Leu Leu Leu Asp 1 5 10 15

Gly Pro Trp Arg Asn Glu Ser Ala Leu Ser Val Glu Thr Leu Leu Asp 20 25 30

Val Leu Val Cys Leu Tyr Thr Glu Cys Ser His Ser Ala Leu Arg Arg

35 40 45

Asp Lys Tyr Val Ala Glu Phe Leu Glu Trp Ala Lys Pro Phe Thr Gln 50 60

Leu Val Lys Glu Met Gln Leu His Arg Glu Asp Phe Glu Ile Ile Lys 65 70 75 80

Val Ile Gly Arg Gly Ala Phe Gly Glu Val Ala Val Lys Met Lys 85 90 95

Asn Thr Glu Arg Ile Tyr Ala Met Lys Ile Leu Asn Lys Trp Glu Met
100 105 110

Leu Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val Leu 115 120 125

Val Asn Gly Asp Cys Gln Trp Ile Thr Ala Leu His Tyr Ala Phe Gln 130 135 140

Asp Glu Asn His Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly Asp 145 150 155 160

Leu Leu Thr Leu Leu Ser Lys Phe Glu Asp Lys Leu Pro Glu Asp Met 165 170 175

Ala Arg Phe Tyr Ile Gly Glu Met Val Leu Ala Ile Asp Ser Ile His 180 185 190

Gln Leu His Tyr Val His Arg Asp Ile Lys Pro Asp Asn Val Leu Leu 195 200 205

Asp Val Asn Gly His Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu Lys 210 215 220

Met Asn Asp Asp Gly Thr Val Gly Ile Phe Val Gly Asp Phe Pro Phe 225 230 235 240

Gly Phe Gly Phe Gly Ile

<210> 130

<211> 378

<212> PRT

<213> Homo sapiens

<400> 130

Met Glu Leu Arg Val Gly Asn Arg Tyr Arg Leu Gly Arg Lys Ile Gly
1 5 10 15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Val Gly Ile Pro Thr Ile Arg 20 25 30

Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met Val Met Glu Leu Leu 35 40 45

Gly	Pro 50	Ser	Leu	Glu	Asp	Leu 55	Phe	Asn	Phe	Cys	Ser 60	Arg	Lys	Phe	Ser
Leu 65	Lys	Thr	Val	Leu	Leu 70	Leu	Ala	Asp	Gln	Met 75	Ile	Ser	Arg	Ile	Glu 80
Tyr	Ile	His	Ser	Lys 85	Asn	Phe	Ile	His	Arg 90	Asp	Val	Lys	Pro	Asp 95	Asn
Phe	Leu	Met	Gly 100	Leu	Gly	Lys	Lys	Gly 105	Asn	Leu	Val	Tyr	Ile 110	Ile	Asp
Phe	Gly	Leu 115	Ala	Lys	Lys	Tyr	Arg 120	Asp	Ala	Arg	Thr	His 125	Gln	His	Ile
Pro	Tyr 130	Arg	Glu	Asn	Lys	Asn 135	Leu	Thr	Gly	Thr	Ala 140	Arg	Tyr	Ala	Ser
Ile 145	Asn	Thr	His	Leu	Gly 150	Ile	Glu	Gln	Ser	Arg 155	Arg	Asp	Asp	Leu	Glu 160
Ser	Leu	Gly	Tyr	Val 165	Leu	Met	Tyr	Phe	Asn 170	Leu	Gly	Ser	Leu	Pro 175	Trp
Gln	Gly	Leu	Lys 180	Ala	Ala	Thr	Lys	Arg 185	Gln	Lys	Tyr	Glu	Arg 190	Ile	Ser
Glu	Lys	Lys 195	Met	Ser	Thr	Pro	Ile 200	Glu	Val	Leu	Cys	Lys 205	Gly	Tyr	Pro
Ser	Glu 210	Phe	Ala	Thr	Tyr	Leu 215	Asn	Phe	Cys	Arg	Ser 220	Leu	Arg	Phe	Asp
Asp 225	Lys	Pro	Asp	Tyr	Ser 230	Tyr	Leu	Arg	Gln	Leu 235	Phe	Arg	Asn	Leu	Phe 240
His	Arg	Gln	Gly	Phe 245	Ser	Tyr	Asp	Tyr	Val 250	Phe	Asp	Trp	Asn	Met 255	Leu
Lys	Phe	Gly	Ala 260	Ser	Arg	Ala	Ala	Asp 265	Asp	Ala	Glu	Arg	Asp 270	Ala	Gly
Asp	Arg	Glu 275	Glu	Arg	Leu	Arg	His 280	Ser	Arg	Asn	Pro	Ala 285	Thr	Arg	Gly
Leu	Pro 290	Ser	Thr	Ala	Ser	Gly 295	Arg	Leu	Arg	Gly	Arg 300	Arg	Lys	Val	Ala
Pro 305	Pro	Thr	Pro	Leu	Thr 310	Pro	Thr	Ser	His	Thr 315	Ala	Asn	Thr	Ser	Pro 320
Arg	Pro	Val	Ser	Gly 325	Met	Glu	Arg	Glu	Arg 330	Lys	Val	Ser	Met	Arg 335	Leu
His	Arg	Gly	Ala 340	Pro	Val	Asn	Ile	Ser 345	Ser	Ser	Asp	Leu	Thr 350	Gly	Arg

Gln Asp Thr Ser Arg Met Ser Thr Ser Gln Ile Pro Gly Arg Val Ala 355 360 365

Ser Ser Gly Leu Gln Ser Val Val His Arg 370 375

<210> 131

<211> 561

<212> PRT

<213> Homo sapiens

<400> 131

Met Val Glu Trp Trp Ser Ala Leu Thr Cys Pro Leu Gln Thr Phe Ala 1 5 10 15

Ala Pro Ser Phe Asp Asp Lys Ile Leu Glu Val Val Ala Val Phe Gly 20 25 30

Ser Met Gln Met Ala Val Ser Arg Val Ile Arg Leu Gln His His Arg 35 40 45

Ile Ala Gln Cys Arg Thr Val Lys Ile Ser Ile Leu Gly Asp Glu Gly 50 55 60

Val Pro Val Gln Val Asp Gly Glu Ala Trp Val Gln Pro Pro Gly Tyr 65 70 75 80

Ile Arg Ile Val His Lys Asn Arg Ala Gln Thr Leu Thr Arg Asp Arg 85 90 95

Ala Phe Glu Ser Thr Leu Lys Ser Trp Glu Asp Lys Gln Lys Cys Glu 100 105 110

Leu Pro Arg Pro Pro Ser Cys Ser Leu His Pro Glu Met Leu Ser Glu
115 120 125

Glu Glu Ala Thr Gln Met Asp Gln Phe Gly Gln Ala Ala Gly Val Leu 130 135 140

Glu Leu Ala His Ala Val Asn Ala Ser Ser Lys Ser Met Asp Arg Val 165 170 175

Tyr Gly Lys Pro Arg Thr Thr Glu Gly Leu Asn Cys Ser Phe Val Leu 180 185 190

Glu Met Val Asn Asn Phe Arg Ala Leu Arg Ser Glu Thr Glu Leu Leu 195 200 205

Leu Ser Gly Lys Met Ala Leu Gln Leu Asp Pro Pro Gln Lys Glu Gln 210 215 220

Leu Gly Ser Ala Leu Ala Glu Met Asp Arg Gln Leu Arg Arg Leu Ala 225 230 235 240

Asp	Thr	Pro	Trp	Leu 245	Cys	Gln	Ser	Ala	Glu 250	Pro	Gly	Asp	Glu	Glu 255	Ser
Val	Met	Leu	Asp 260	Leu	Ala	Lys	Arg	Ser 265	Arg	Ser	Gly	Lys	Phe 270	Arg	Leu
Val	Thr	Lys 275	Phe	Lys	Lys	Glu	Lys 280	Asn	Asn	Lys	Asn	Lys 285	Glu	Ala	His
Ser	Ser 290	Leu	Gly	Ala	Pro	Val 295	His	Leu	Trp	Gly	Thr 300	Glu	Glu	Val	Ala
Ala 305	Trp	Leu	Glu	His	Leu 310	Ser	Leu	Cys	Glu	Tyr 315	Lys	Asp	Ile	Phe	Thr 320
Arg	His	Asp	Ile	Arg 325	Gly	Ser	Glu	Leu	Leu 330	His	Leu	Glu	Arg	Arg 335	Asp
Leu	Lys	Asp	Leu 340	Gly	Val	Thr	Lys	Val 345	Gly	His	Met	Lys	Arg 350	Ile	Leu
Cys	Gly	Ile 355	Lys	Glu	Leu	Ser	Arg 360	Ser	Ala	Pro	Ala	Val 365	Glu	Ala	Gln
Pro	Leu 370	Ser	Ser	Gln	Pro	Val 375	Ala	Ser	Thr	Ser	Pro 380	Pro	Pro	Arg	Pro
Ser 385	Leu	Arg	Pro	Leu	Ser 390	Leu	Trp	Pro	Leu	Arg 395	Leu	Leu	Pro	Leu	Arg 400
	_		_	405	Ala				410					415	
			420		Ser			425					430		
		435			Thr		440					445			
	450				Gly	455					460				
Ala 465	Суѕ	Ala	Val	Gly	Gln 470	Gly	Ile	Gln	Arg	Arg 475	Leu	Ala	Ser	Trp	Ala 480
Leu	Leu	Ala	Trp	Pro 485	Arg	Ala	Trp	Ile	Val 490	Pro	Gly	Ala	Pro	Leu 495	Arg
Val	Ser	Phe	Cys 500	Gly	Arg	Thr	Val	Trp 505	Leu	Arg	Leu	Leu	Ala 510	Pro	Ser
Gln	Phe	Ser 515	Glu	Thr	Trp	Leu	Gly 520	Pro	Ser	Thr	Ala	Ala 525	Cys	Lys	Gly
Pro	Cys 530	Leu	Leu	Met	Gln	Leu 535	Leu	Leu	Asn	Lys	Asn 540	Arg	Ala	Leu	Ser

Trp Phe Glu Ser Ser Met Asp Val Ser Ser Leu Val Asp Cys Asn Leu 545 550 555 560

Thr

<210> 132

<211> 213

<212> PRT

<213> Homo sapiens

<400> 132

Met Ser Asp Val Ala Ile Val Lys Glu Gly Trp Leu His Lys Arg Gly
1 5 10 15

Glu Tyr Ile Lys Thr Trp Arg Pro Arg Tyr Phe Leu Leu Lys Asn Asp 20 25 30

Gly Thr Phe Ile Gly Tyr Lys Glu Arg Pro Gln Asp Val Asp Gln Arg
35 40 45

Glu Ala Pro Leu Asn Asn Phe Ser Val Ala Gln Cys Gln Leu Met Lys
50 60

Thr Glu Arg Pro Arg Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp 65 70 75 80

Thr Thr Val Ile Glu Arg Thr Phe His Val Glu Thr Pro Glu Glu Arg
85 90 95

Glu Glu Trp Thr Thr Ala Ile Gln Thr Val Ala Asp Gly Leu Lys Lys
100 105 110

Gln Glu Glu Glu Met Asp Phe Arg Ser Gly Ser Pro Ser Asp Asn 115 120 125

Ser Gly Ala Glu Glu Met Glu Val Ser Leu Ala Lys Pro Lys His Arg 130 135 140

Val Ala Leu Gly Gly Arg Ala Gly Pro Ala His Val Ser Pro His Ser 145 150 155 160

Val Ser Gln Pro Pro Trp Ala Val Cys His Gln Leu Ser Val Ile Ser 165 170 175

Leu Gly Pro Trp Ala Ser Val Gln Pro Gly Gly Thr Arg Cys Asn Leu 180 185 190

Thr Met Val Cys Trp Pro Ala Pro Ser Pro Gly Gly Gly Arg His Thr
195 200 205

Ala Ala Pro Gln His 210

<210> 133

<211> 425

<212> PRT

<213> Homo sapiens

<400> 133

Met Ile Val His Asp Asp Val Glu Ser Glu Pro Ala Met Thr Pro Ser 1 5 10 15

Lys Glu Gly Thr Leu Ile Val Arg Gln Thr Gln Ser Ala Ser Ser Thr 20 25 30

Leu Gln Lys His Lys Ser Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro 35 40 45

Arg Leu Leu Gln Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val
50 60

Val Gly Phe Ser Cys Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp 65 70 75 80

Pro Thr Arg Lys Gly Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg 85 90 95

Pro Gln Ser Asp Thr Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn 100 105 110

Ser Glu Ile Leu Cys Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly
115 120 125

Thr Glu Ser Gly Leu Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val 130 135 140

Tyr Pro Leu Ile Asn Arg Arg Phe Gln Gln Met Asp Val Leu Glu 145 150 155 160

Gly Leu Asn Val Leu Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg 165 170 175

Val Tyr Tyr Leu Ser Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro 180 185 190

Glu Val Glu Lys Lys Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly
195 200 205

Cys Val His Tyr Lys Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val 210 215 220

Ile Ala Leu Lys Ser Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro 225 230 235 240

Tyr His Lys Phe Met Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys 245 250 255

Pro Leu Leu Val Asp Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val 260 265 270

Ile Tyr Gly Ser Cys Ala Gly Phe His Ala Val Asp Val Asp Ser Gly 275 280 Ser Val Tyr Asp Ile Tyr Leu Pro Thr His Ile Gln Cys Ser Ile Lys 295 Pro His Ala Ile Ile Ile Leu Pro Asn Thr Asp Gly Met Glu Leu Leu 315 Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr Tyr Gly Arg Ile Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro Thr Ser Val Ala 345 Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly Glu Lys Ala Ile Glu 360 Ile Arg Ser Val Glu Thr Gly His Leu Asp Gly Val Phe Met His Lys 370 375 Arg Ala Gln Arg Leu Lys Phe Leu Cys Glu Arg Asn Asp Lys Val Phe 390 395 Phe Ala Ser Val Arg Ser Gly Gly Ser Ser Gln Val Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu Leu Ser Trp 420 <210> 134 <211> 515 <212> PRT <213> Homo sapiens <400> 134 Met Ala Ser Arg Thr Pro Arg Asn Cys Ala Val Leu Lys Gly Glu Val Asp Leu Thr Ala Leu Ala Lys Glu Leu Arg Ala Val Glu Asp Val Arg Pro Pro His Lys Val Thr Asp Tyr Ser Ser Ser Glu Glu Ser Gly Thr Thr Asp Glu Glu Asp Asp Val Glu Gln Glu Gly Ala Asp Glu Ser Thr Ser Gly Pro Glu Asp Thr Arg Ala Ala Ser Ser Leu Asn Leu Ser Asn Gly Glu Thr Glu Ser Val Lys Thr Met Ile Val His Asp Asp 90 Val Glu Ser Glu Pro Ala Met Thr Pro Ser Lys Glu Gly Thr Leu Ile

105

100

Val	Arg	Gln 115	Thr	Gln	Ser	Ala	Ser 120	Ser	Thr	Leu	Gln	Lys 125	His	Lys	Ser
Ser	Ser 130	Ser	Phe	Thr	Pro	Phe 135	Ile	Asp	Pro	Arg	Leu 140	Leu	Gln	Ile	Ser
Pro 145	Ser	Ser	Gly	Thr	Thr 150	Val	Thr	Ser	Val	Val 155	Gly	Phe	Ser	Cys	Asp 160
Gly	Met	Arg	Pro	Glu 165	Ala	Ile	Arg	Gln	Asp 170	Pro	Thr	Arg	Lys	Gly 175	Ser
Val	Val	Asn	Val 180	Asn	Pro	Thr	Asn	Thr 185	Arg	Pro	Gln	Ser	Asp 190	Thr	Pro
Glu	Ile	Arg 195	Lys	Tyr	Lys	Lys	Arg 200	Phe	Asn	Ser	Glu	Ile 205	Leu	Cys	Ala
Ala	Leu 210	Trp	Gly	Val	Asn	Leu 215	Leu	Val	Gly	Thr	Glu 220	Ser	Gly	Leu	Met
Leu 225	Leu	Asp	Arg	Ser	Gly 230	Gln	Gly	Lys	Val	Tyr 235	Pro	Leu	Ile	Asn	Arg 240
Arg	Arg	Phe	Gln	Gln 245	Met	Asp	Val	Leu	Glu 250	Gly	Leu	Asn	Val	Leu 255	Val
Thr	Ile	Ser	Gly 260	Lys	Lys	Asp	Lys	Leu 265	Arg	Val	Tyr	Tyr	Leu 270	Ser	Trp
Leu	Arg	Asn 275	Lys	Ile	Leu	His	Asn 280	Asp	Pro	Glu	Val	Glu 285	Lys	Lys	Gln
Gly	Trp 290	Thr	Thr	Val	Gly	Asp 295	Leu	Glu	Gly	Cys	Val 300	His	Tyr	Lys	Val
Val 305	Lys	Tyr	Glu	Arg	Ile 310	Lys	Phe	Leu	Val	Ile 315	Ala	Leu	Lys	Ser	Ser 320
Val	Glu	Val	Tyr	Ala 325	Trp	Ala	Pro	Lys	Pro 330	Tyr	His	Lys	Phe	Met 335	Ala
Phe	Lys	Ser	Phe 340	Gly	Glu	Leu	Val	His 345	Lys	Pro	Leu	Leu	Val 350	Asp	Leu
Thr	Val	Glu 355	Glu	Gly	Gln	Arg	Leu 360	Lys	Val	Ile	Tyr	Gly 365	Ser	Cys	Ala
Gly	Phe 370	His	Ala	Val	Asp	Val 375	Asp	Ser	Gly	Ser	Val 380	Tyr	Asp	Ile	Tyr
Leu 385	Pro	Thr	His	Ile	Gln 390	Cys	Ser	Ile	Lys	Pro 395	His	Ala	Ile	Ile	Ile 400
Leu	Pro	Asn	Thr	Asp 405	Gly	Met	Glu	Leu	Leu 410	Val	Cys	Tyr	Glu	Asp 415	Glu

Gly Val Tyr Val Asn Thr Tyr Gly Arg Ile Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro Thr Ser Val Ala Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly Glu Lys Ala Ile Glu Ile Arg Ser Val Glu Thr 450 Gly His Leu Asp Gly Val Phe Met His Lys Arg Ala Gln Arg Leu Lys Phe Leu Cys Glu Arg Asn Asp Lys Val Phe Phe Ala Ser Val Arg Ser 490 Gly Gly Ser Ser Gln Val Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu 505 Leu Ser Trp 515 <210> 135 <211> 468 <212> PRT <213> Homo sapiens <400> 135 Met Ser Ala Arg Val Gln Leu Thr Lys Ser Val Pro Ala Ile Met Arg 10 Ala Met Ala Leu Arg Phe Ala Phe Thr Ser Cys Gln Ile Ser Tyr Ser 25 Lys Ala Ile Pro Pro Pro Leu Pro Pro Pro Pro Pro Pro His Pro Pro 35 Ala Ser Arg His Pro Pro Cys Pro His Arg His Pro Arg Asp Lys Leu Thr Ala Asn Glu Thr Gln Ser Ala Ser Ser Thr Leu Gln Lys His Lys Ser Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro Arg Leu Leu Gln Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly Phe Ser Cys 105 Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr Arg Lys Gly

Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln Ser Asp Thr

Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu Ile Leu Cys

135

130

Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu Ser Gly Leu 165 170 175

Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro Leu Ile Asn 180 185 190

Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu Asn Val Leu 195 200 205

Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr Tyr Leu Ser 210 215 220

Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val Glu Lys Lys 225 230 235 240

Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val His Tyr Lys 245 250 255

Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala Leu Lys Ser 260 265 270

Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His Lys Phe Met 275 280 285

Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu Leu Val Asp 290 295 300

Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile Tyr Gly Ser Cys 305 310 315

Ala Gly Phe His Ala Val Asp Val Asp Ser Gly Ser Val Tyr Asp Ile 325 330 335

Tyr Leu Pro Thr His Ile Gln Cys Ser Ile Lys Pro His Ala Ile Ile 340 345 350

Ile Leu Pro Asn Thr Asp Gly Met Glu Leu Leu Val Cys Tyr Glu Asp 355 360 365

Glu Gly Val Tyr Val Asn Thr Tyr Gly Arg Ile Thr Lys Asp Val Val 370 380

Leu Gln Trp Gly Glu Met Pro Thr Ser Val Ala Tyr Ile Arg Ser Asn 385 390 395 400

Gln Thr Met Gly Trp Gly Glu Lys Ala Ile Glu Ile Arg Ser Val Glu
405 410 415

Thr Gly His Leu Asp Gly Val Phe Met His Lys Arg Ala Gln Arg Leu
420 425 430

Lys Phe Leu Cys Glu Arg Asn Asp Lys Val Phe Phe Ala Ser Val Arg 435 440 445

Ser Gly Gly Ser Ser Gln Val Tyr Phe Met Thr Leu Gly Arg Thr Ser

450

Leu Leu Ser Trp 465

<210> 136

<211> 666

<212> PRT

<213> Homo sapiens

<220>

<221>

<222> (1)..(666)

<223> "XAA" can be any amino acid

<400> 136

Met Asp Cys Gln Leu Ser Ile Leu Leu Leu Leu Ser Cys Ser Val Leu 1 5 10 15

Asp Ser Phe Gly Glu Leu Ile Pro Gln Pro Ser Asn Glu Val Asn Leu 20 25 30

Leu Asp Ser Lys Thr Ile Gln Gly Glu Leu Gly Trp Ile Ser Tyr Pro 35 40 45

Ser His Gly Trp Glu Glu Ile Ser Gly Val Asp Glu His Tyr Thr Pro 50 55 60

Ile Arg Thr Tyr Gln Val Cys Asn Val Met Asp His Ser Gln Asn Asn 65 70 75 80

Trp Leu Arg Thr Asn Trp Val Pro Arg Asn Ser Ala Gln Lys Ile Tyr 85 90 95

Val Glu Leu Lys Phe Thr Leu Arg Asp Cys Asn Ser Ile Pro Leu Val 100 105 110

Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu Tyr Tyr Met Glu Ser Asp 115 120 125

Asp Asp His Gly Val Lys Phe Arg Glu His Gln Phe Thr Lys Ile Asp 130 135 140

Thr Ile Ala Ala Asp Glu Ser Phe Thr Gln Met Asp Leu Gly Asp Arg 145 150 155 160

Ile Leu Lys Leu Asn Thr Glu Ile Arg Glu Val Gly Pro Val Asn Lys 165 170 175

Lys Gly Phe Tyr Leu Ala Phe Gln Asp Val Gly Ala Cys Val Ala Leu 180 185 190

Val Ser Val Arg Val Tyr Phe Lys Lys Cys Pro Phe Thr Val Lys Asn 195 200 205

Leu	Ala 210	Met	Phe	Pro	Asp	Thr 215	Val	Pro	Met	Asp	Ser 220	Gln	Ser	Leu	Val	
Glu 225	Val	Arg	Gly	Ser	Cys 230	Val	Asn	Asn	Ser	Lys 235	Glu	Glu	Asp	Pro	Pro 240	
Arg	Met	Tyr	Cys	Ser 245	Thr	Glu	Gly	Glu	Trp 250	Leu	Val	Pro	Ile	Gly 255	Lys	
Cys	Ser	Cys	Asn 260	Ala	Gly	Tyr	Glu	Glu 265	Arg	Gly	Phe	Met	Cys 270	Gln	Ala	
Cys	Arg	Pro 275	Gly	Phe	Tyr	Lys	Ala 280	Leu	Asp	Gly	Asn	Met 285	Lys	Cys	Ala	
Lys	Cys 290	Pro	Pro	His	Ser	Ser 295	Thr	Gln	Glu	Asp	Gly 300	Ser	Met	Asn	Cys	
Arg 305	Cys	Glu	Asn	Asn	Tyr 310	Phe	Arg	Ala	Asp	Lys 315	Asp	Pro	Pro	Ser	Met 320	
Ala	Cys	Thr	Arg	Pro 325	Pro	Ser	Ser	Pro	Arg 330	Asn	Val	Ile	Ser	Asn 335	Ile	
Asn	Glu	Thr	Ser 340	Val	Ile	Leu	Asp	Trp 345	Ser	Trp	Pro	Leu	Asp 350	Thr	Gly	
Gly	Arg	Lys 355	Asp	Val	Thr	Phe	Asn 360	Ile	Ile	Cys	Lys	Lys 365	Cys	Gly	Trp	
Asn	Ile 370	Lys	Gln	Cys	Glu	Pro 375	Cys	Ser	Pro	Asn	Val 380	Arg	Phe	Leu	Pro	
Arg 385	Gln	Phe	Gly	Leu	Thr 390	Asn	Thr	Thr	Val	Thr 395	Val	Thr	Asp	Leu	Leu 400	
Ala	His	Thr	Asn	Tyr 405	Thr	Phe	Glu	Ile	Asp 410	Ala	Val	Asn	Gly	Val 415	Ser	
Glu	Leu	Ser	Ser 420	Pro	Pro	Arg	Gln	Phe 425	Ala	Ala	Val	Ser	Ile 430	Thr	Thr	
Asn	Gln	Ala 435	Ala	Pro	Ser	Pro	Val 440	Leu	Thr	Ile	Lys	Lys 445	Asp	Arg	Thr	
Ser	Arg 450	Asn	Ser	Ile	Ser	Leu 455	Ser	Trp	Gln	Glu	Pro 460	Glu	His	Pro	Asn	
Gly 465	Ile	Ile	Leu	Asp	Tyr 470	Glu	Val	Lys	Tyr	Tyr 475	Glu	Lys	Gln	Glu	Gln 480	
Glu	Thr	Ser	Tyr	Thr 485	Ile	Leu	Arg	Ala	Arg 490	Gly	Thr	Asn	Val	Thr 495	Ile	
Ser	Ser	Leu	Lys 500	Pro	Asp	Thr	Ile	Tyr 505	Val	Phe	Gln	Ile	Arg 510	Ala	Arg	

Thr Ala Ala Gly Tyr Gly Thr Asn Ser Arg Lys Phe Glu Phe Glu Thr 515 525 Ser Pro Asp Ser Phe Ser Ile Ser Gly Glu Ser Ser Gln Val Val Met 535 Ile Ala Ile Ser Ala Ala Val Ala Ile Ile Leu Leu Thr Val Val Ile 550 555 Tyr Val Leu Ile Gly Arg Phe Cys Gly Tyr Lys Ser Lys His Gly Ala 570 Asp Glu Lys Arg Leu His Phe Gly Asn Gly His Leu Lys Leu Pro Gly Leu Arg Thr Tyr Val Asp Pro His Thr Tyr Glu Asp Pro Thr Gln Ala 600 Val His Glu Phe Ala Lys Glu Leu Asp Ala Thr Asn Ile Ser Ile Asp 615 620 Lys Val Val Gly Ala Val Leu Thr Ser Glu Gln Leu His Asp Ala Glu 630 635 Xaa Phe Ser Leu Ala Gly Phe Asn Val Ser Ser Gln Gly Val His Phe 650 Ser Pro Ala Arg Ser Leu Pro Val Ala Asn 660 <210> 137 <211> 458 <212> PRT <213> Homo sapiens <400> 137 Met Lys Tyr Thr Phe Trp Gly Trp Val Ala Val Lys Leu Lys Asn Ala Asp Lys Val Phe Ala Met Lys Ile Leu Asn Lys Trp Glu Met Leu Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val Leu Val 40 Asn Gly Asp Asn Lys Trp Ile Thr Thr Leu His Tyr Ala Phe Gln Asp Asp Asn Asn Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly Asp Leu Leu Thr Leu Leu Ser Lys Phe Glu Asp Arg Leu Pro Glu Asp Met Ala 90 Arg Phe Tyr Leu Ala Glu Met Val Ile Ala Ile Asp Ser Val His Gln 100 105 110

Leu	His	Tyr 115	Val	His	Arg	Asp	Ile 120	Lys	Pro	Asp	Asn	Ile 125	Leu	Met	Asp
Met	Asn 130	Gly	His	Ile	Arg	Leu 135	Ala	Asp	Phe	Gly	Ser 140	Cys	Leu	Lys	Leu
Met 145	Glu	Asp	Gly	Thr	Val 150	Gln	Ser	Ser	Val	Ala 155	Val	Gly	Thr	Pro	Asp 160
Tyr	Ile	Ser	Pro	Glu 165	Ile	Leu	Gln	Ala	Met 170	Glu	Asp	Gly	Lys	Gly 175	Arg
Tyr	Gly	Pro	Glu 180	Cys	Asp	Trp	Trp	Ser 185	Leu	Gly	Val	Cys	Met 190	Tyr	Glu
Met	Leu	Tyr 195	Gly	Glu	Thr	Pro	Phe 200	Tyr	Ala	Glu	Ser	Leu 205	Val	Glu	Thr
Tyr	Gly 210	Lys	Ile	Met	Asn	His 215	Lys	Glu	Arg	Phe	Gln 220	Phe	Pro	Ala	Gln
Val 225	Thr	Asp	Val	Ser	Glu 230	Asn	Ala	Lys	Asp	Leu 235	Ile	Arg	Arg	Leu	Ile 240
Cys	Ser	Arg	Glu	His 245	Arg	Leu	Gly	Gln	Asn 250	Gly	Ile	Glu	Asp	Phe 255	Lys
Lys	His	Pro	Phe 260	Phe	Ser	Gly	Ile	Asp 265	Trp	Asp	Asn	Ile	Arg 270	Asn	Cys
Glu	Ala	Pro 275	Tyr	Ile	Pro	Glu	Val 280	Ser	Ser	Pro	Thr	Asp 285	Thr	Ser	Asn
Phe	Asp 290	Val	Asp	Asp	Asp	Cys 295	Leu	Lys	Asn	Ser	Glu 300	Thr	Met	Pro	Pro
Pro 305	Thr	His	Thr	Ala	Phe 310	Ser	Gly	His	His	Leu 315	Pro	Phe	Val	Gly	Phe 320
Thr	Tyr	Thr	Ser	Ser 325	Cys	Val	Leu	Ser	Asp 330	Arg	Ser	Cys	Leu	Arg 335	Val
Thr	Ala	Gly	Pro 340	Thr	Ser	Leu	Asp	Leu 345	Asp	Val	Asn	Val	Gln 350	Arg	Thr
Leu	Asp	Asn 355	Asn	Leu	Ala	Thr	Glu 360	Ala	Tyr	Glu	Arg	Arg 365	Ile	Lys	Arg
Leu	Glu 370	Gln	Glu	Lys	Leu	Glu 375	Leu	Ser	Arg	Lys	Leu 380	Gln	Glu	Ser	Thr
Gln 385	Thr	Val	Gln	Ala	Leu 390	Gln	Tyr	Ser	Thr	Val 395	Asp	Gly	Pro	Leu	Thr 400
Ala	Ser	Lys	Asp	Leu 405	Glu	Ile	Lys	Asn	Leu 410	Lys	Glu	Glu	Ile	Glu 415	Lys

Leu Arg Lys Gln Val Thr Glu Ser Ser His Leu Glu Gln Gln Leu Glu 420 425 430

Glu Ala Asn Ala Val Arg Gln Glu Leu Asp Asp Ala Phe Arg Gln Ile 435 440 445

Lys Ala Tyr Glu Lys Gln Ile Lys Thr Leu 450 455

<210> 138

<211> 262

<212> PRT

<213> Homo sapiens

<400> 138

Met Glu Val Val Asp Pro Gln Gln Leu Gly Met Phe Thr Glu Gly Glu
1 5 10 15

Leu Met Ser Val Gly Met Asp Thr Phe Ile His Arg Ile Asp Ser Thr 20 25 30

Glu Val Ile Tyr Gln Pro Arg Arg Lys Arg Ala Lys Leu Ile Gly Lys 35 40 45

Tyr Leu Met Gly Asp Leu Leu Gly Glu Gly Ser Tyr Gly Lys Val Lys 50 55 60

Glu Val Leu Asp Ser Glu Thr Leu Cys Arg Arg Ala Val Lys Ile Leu 65 70 75 80

Lys Lys Lys Leu Arg Arg Ile Pro Asn Gly Glu Ala Asn Val Lys 85 90 95

Lys Glu Ile Gln Leu Leu Arg Arg Leu Arg His Lys Asn Val Ile Gln
100 105 110

Leu Val Asp Val Leu Tyr Asn Glu Glu Lys Gln Lys Met Tyr Met Val

Met Glu Tyr Cys Val Cys Gly Met Gln Glu Met Leu Asp Ser Val Pro 130 135 140

Glu Lys Arg Phe Pro Val Cys Gln Ala His Gly Ser Pro Ser Arg Arg 145 150 155 160

Gly Gly Arg His Ala Ser Val Pro Thr Thr Pro Gln Asp Leu Arg Ser 165 170 175

Ala Leu Gln Gly Arg Ala Gly Gln Gln Gly Pro Gly Ala Ala Leu 180 185 190

Pro Pro Arg Pro Pro Gly Ser Ala Arg Gly Leu Leu Thr Ser Gln Pro
195 200 205

Arg Ala Glu Pro Ser Arg Ala Gly Val Gly Gly Arg Arg Pro Pro

210 215 220

Cys Thr Leu Cys Gly Asp Tyr Trp Pro Arg Pro Trp Pro Arg Ala Pro 225 230 235 240

Gln Gly Ala Gln Arg Arg Pro Ala Ala Pro Pro Gln Thr Ser Trp Arg 245 250 255

Val Trp Arg Pro Gly Ser 260

<210> 139

<211> 203

<212> PRT

<213> Homo sapiens

<400> 139

Met Glu Val Val Asp Pro Gln Gln Leu Gly Met Phe Thr Glu Gly Glu
1 5 10 15

Leu Met Ser Val Gly Met Asp Thr Phe Ile His Arg Ile Asp Ser Thr
20 25 30

Glu Val Ile Tyr Gln Pro Arg Arg Lys Arg Ala Lys Leu Ile Gly Lys 35 40 45

Tyr Leu Met Gly Asp Leu Leu Gly Glu Gly Ser Tyr Gly Lys Val Lys
50 60

Glu Val Leu Asp Ser Glu Thr Leu Cys Arg Arg Ala Val Lys Ile Leu 65 70 75 80

Lys Lys Lys Leu Arg Arg Ile Pro Asn Gly Glu Ala Asn Val Lys 85 90 95

Lys Glu Ile Gln Leu Leu Arg Arg Leu Arg His Lys Asn Val Ile Gln
100 105 110

Leu Val Asp Val Leu Tyr Asn Glu Glu Lys Gln Lys Met Tyr Met Val 115 120 125

Met Glu Tyr Cys Val Cys Gly Met Gln Glu Met Leu Asp Ser Val Pro 130 135 140

Glu Lys Arg Phe Pro Val Cys Gln Ala His Gly Tyr Phe Cys Gln Leu 145 150 155 160

Ile Asp Gly Leu Glu Tyr Leu His Ser Gln Gly Ile Val His Lys Asp 165 170 175

Ile Lys Pro Gly Asn Leu Leu Euu Thr Thr Gly Gly Thr Leu Lys Ile 180 185 190

Ser Asp Leu Gly Val Ala Glu Val Gly Thr Cys 195 200 <210> 140

<211> 244

<212> PRT

<213> Homo sapiens

<400> 140

Met Asp Arg Glu Thr Thr Pro Leu Gly Leu Leu Trp Leu Ile Gln Val
1 5 10 15

Ile Pro Ser Lys Leu Leu Pro Ser Leu Gln Val Lys Asp Phe Leu Ser 20 25 30

Gln Leu Arg Ser Ser Asn Arg Arg Phe Ser Ile Pro Glu Ser Gly Gln 35 40 45

Gly Gly Thr Glu Met Asp Gly Phe Arg Arg Thr Ile Glu Asn Gln His 50 55 60

Ser Arg Asn Asp Val Met Val Ser Glu Trp Leu Asn Lys Leu Asn Leu 65 70 75 80

Glu Glu Pro Pro Ser Ser Val Pro Lys Lys Cys Pro Ser Leu Thr Lys 85 90 95

Arg Ser Arg Ala Gln Glu Glu Gln Val Pro Gln Ala Trp Thr Ala Gly
100 105 110

Thr Ser Ser Asp Ser Met Ala Gln Pro Pro Gln Thr Pro Glu Thr Ser 115 120 125

Thr Phe Arg Asn Gln Met Pro Ser Pro Thr Ser Thr Gly Thr Pro Ser 130 135 140

Pro Gly Pro Arg Gly Asn Gln Gly Ala Glu Arg Gln Gly Met Asn Trp 145 150 155 160

Ser Cys Arg Thr Pro Glu Pro Asn Pro Val Thr Gly Arg Pro Leu Val 165 170 175

Asn Ile Tyr Asn Cys Ser Gly Val Gln Val Gly Asp Asn Asn Tyr Leu 180 185 190

Thr Met Gln Gln Thr Thr Ala Leu Pro Thr Trp Gly Leu Ala Pro Ser 195 200 205

Gly Lys Gly Arg Gly Leu Gln His Pro Pro Pro Val Gly Ser Gln Glu 210 215 220

Gly Pro Lys Asp Pro Glu Ala Trp Ser Arg Pro Gln Gly Trp Tyr Asn 225 230 235 240

His Ser Gly Lys

<210> 141

<211> 222

<212> PRT

<213> Homo sapiens

<400> 141

Met Val Lys Leu Tyr Leu Tyr Gln Lys Asn Val Lys Ile Ala Ile Phe 1 5 10 15

Asp Leu Lys Ser Arg Gln Asn Phe Phe Val Tyr Phe Arg Glu Glu Gln
20 25 30

Ala Arg Glu Leu Tyr Arg Arg Leu Arg Glu Lys Pro Arg Asp Gln Arg 35 40 45

Thr Glu Gly Asp Ser Gln Glu Met Val Arg Leu Leu Gln Ala Ile 50 55 60

Gln Ser Phe Glu Lys Lys Val Arg Val Ile Tyr Thr Gln Leu Ser Lys 65 70 75 80

Thr Val Val Cys Lys Gln Lys Ala Leu Glu Leu Leu Pro Lys Val Glu 85 90 95

Glu Val Val Ser Leu Met Asn Glu Asp Glu Lys Thr Val Val Arg Leu 100 105 110

Gln Glu Lys Arg Gln Lys Glu Leu Trp Asn Leu Leu Lys Ile Ala Cys 115 120 125

Ser Lys Val Arg Gly Pro Val Ser Gly Ser Pro Asp Ser Met Asn Ala 130 135 140

Ser Arg Leu Ser Gln Pro Gly Gln Leu Met Ser Gln Pro Ser Thr Ala 145 150 155 160

Ser Asn Ser Leu Pro Glu Pro Ala Lys Lys Ser Glu Glu Leu Val Ala 165 170 175

Glu Ala His Asn Leu Cys Thr Leu Leu Glu Asn Ala Ile Gln Asp Thr 180 185 190

Val Arg Glu Gln Asp Gln Ser Phe Thr Ala Leu Asp Trp Ser Trp Leu 195 200 205

Gln Thr Glu Glu Glu His Ser Cys Leu Glu Gln Ala Ser 210 215 220

<210> 142

<211> 409

<212> PRT

<213> Homo sapiens

<400> 142

Met Arg Leu Thr Leu Leu Cys Cys Thr Trp Arg Glu Glu Arg Met Gly
1 5 10 15

- Glu Glu Gly Ser Glu Leu Pro Val Cys Ala Ser Cys Gly Gln Arg Ile
 20 25 30

 Tyr Asp Gly Gln Tyr Leu Gln Ala Leu Asn Ala Asp Trp His Ala Asp
 35 40 45
- Cys Phe Arg Cys Cys Asp Cys Ser Ala Ser Leu Ser His Gln Tyr Tyr 50 55 60
- Glu Lys Asp Gly Gln Leu Phe Cys Lys Lys Asp Tyr Trp Ala Arg Tyr 65 70 75 80
- Gly Glu Ser Cys His Gly Cys Ser Glu Gln Ile Thr Lys Gly Leu Val 85 90 95
- Met Val Ala Gly Glu Leu Lys Tyr His Pro Glu Cys Phe Ile Cys Leu 100 105 110
- Thr Cys Gly Thr Phe Ile Gly Asp Gly Asp Thr Tyr Thr Leu Val Glu 115 120 125
- His Ser Lys Leu Tyr Cys Gly His Cys Tyr Tyr Gln Thr Val Val Thr 130 135 140
- Pro Val Ile Glu Gln Ile Leu Pro Asp Ser Pro Gly Ser His Leu Pro 145 150 155 160
- His Thr Val Thr Leu Val Ser Ile Pro Ala Ser Ser His Gly Lys Arg 165 170 175
- Gly Leu Ser Val Ser Ile Asp Pro Pro His Gly Pro Pro Gly Cys Gly 180 185 190
- Thr Glu His Ser His Thr Val Arg Val Gln Gly Val Asp Pro Gly Cys 195 200 205
- Met Ser Pro Asp Val Lys Asn Ser Ile His Val Gly Asp Arg Ile Leu 210 215 220
- Glu Ile Asn Gly Thr Pro Ile Arg Asn Val Pro Leu Asp Glu Ile Asp 225 230 235 240
- Leu Leu Ile Gln Glu Thr Ser Arg Leu Leu Gln Leu Thr Leu Glu His
 245 250 255
- Asp Pro His Asp Thr Leu Gly His Gly Leu Gly Pro Glu Thr Ser Pro 260 265 270
- Leu Ser Ser Pro Ala Tyr Thr Pro Ser Gly Glu Ala Gly Ser Ser Ala 275 280 285
- Arg Gln Lys Pro Val Leu Arg Ser Cys Ser Ile Asp Arg Ser Pro Gly
 290 295 300
- Ala Gly Ser Leu Gly Ser Pro Ala Ser Gln Arg Lys Asp Leu Gly Arg 305 310 315 320

Ser Glu Ser Leu Arg Val Val Cys Arg Pro His Arg Ile Phe Arg Pro 325 330 Ser Asp Leu Ile His Gly Glu Val Leu Gly Lys Gly Cys Phe Gly Gln 345 Ala Ile Lys Val Gln Ser Met Pro Gly Ser Gln Leu Asp Ser Leu Gly 360 Gly Thr Pro Pro Ser Ser Phe Leu Pro Ser Leu Trp Lys His Ser Gly 370 375 Arg Gly Ile Trp Leu Ser Asp Ser Leu Ala Ser Ala Leu Ser Ser Leu 390 395 Gly Leu Leu Glu Leu Ile Arg Asn Arg 405 <210> 143 <211> 305 <212> PRT <213> Homo sapiens <400> 143 Met Arg Leu Thr Leu Leu Cys Cys Thr Trp Arg Glu Glu Arg Met Gly Glu Glu Gly Ser Glu Leu Pro Val Cys Ala Ser Cys Gly Gln Arg Ile 25 Tyr Asp Gly Gln Tyr Leu Gln Ala Leu Asn Ala Asp Trp His Ala Asp Cys Phe Arg Cys Cys Asp Cys Ser Ala Ser Leu Ser His Gln Tyr Tyr Glu Lys Asp Gly Gln Leu Phe Cys Lys Lys Asp Tyr Trp Ala Arg Tyr Gly Glu Ser Cys His Gly Cys Ser Glu Gln Ile Thr Lys Gly Leu Val Met Val Ala Gly Glu Leu Lys Tyr His Pro Glu Cys Phe Ile Cys Leu 105 Thr Cys Gly Thr Phe Ile Gly Asp Gly Asp Thr Tyr Thr Leu Val Glu 115 His Ser Lys Leu Tyr Cys Gly His Cys Tyr Tyr Gln Thr Val Val Thr 135 Pro Val Ile Glu Gln Ile Leu Pro Asp Ser Pro Gly Ser His Leu Pro 145 150 155 160 His Thr Val Thr Leu Val Ser Ile Pro Ala Ser Ser His Gly Lys Arg

170

175

165

Gly Leu Ser Val Ser Ile Asp Pro Pro His Gly Pro Pro Gly Cys Gly Thr Glu His Ser His Thr Val Arg Val Gln Gly Val Asp Pro Gly Cys Met Ser Pro Asp Val Lys Asn Ser Ile His Val Gly Asp Arg Ile Leu 215 Glu Ile Asn Gly Thr Pro Ile Arg Asn Val Pro Leu Asp Glu Ile Asp Leu Leu Ile Gln Glu Thr Ser Arg Leu Leu Gln Leu Thr Leu Glu His Asp Pro His Asp Thr Leu Gly His Gly Leu Gly Pro Glu Thr Ser Pro Leu Ser Ser Pro Ala Tyr Thr Pro Ser Gly Glu Ala Gly Ser Ser Ala Arg Gln Lys Pro Val Phe Ala Arg Thr Trp Val Ala Leu Ser Pro Ser Ala 305 <210> 144 780 <211> <212> PRT <213> Homo sapiens <400> 144 Met Ala Ser Asp Ala Val Gln Ser Glu Pro Arg Ser Trp Ser Leu Leu Glu Gln Leu Gly Leu Ala Gly Ala Asp Leu Ala Ala Pro Gly Val Gln Gln Gln Leu Glu Leu Glu Arg Glu Arg Leu Arg Arg Glu Ile Arg Lys Glu Leu Lys Leu Lys Glu Gly Ala Glu Asn Leu Arg Arg Ala Thr Thr Asp Leu Gly Arg Ser Leu Gly Pro Val Glu Leu Leu Leu Arg Gly Ser Ser Arg Arg Leu Asp Leu Leu His Gln Gln Leu Gln Glu Leu His Ala 85

His Val Val Leu Pro Asp Pro Ala Ala Thr His Asp Gly Pro Gln Ser

Pro Gly Ala Gly Gly Pro Thr Cys Ser Ala Thr Asn Leu Ser Arg Val

100

Ala	Gly 130	Leu	Glu	Lys	Gln	Leu 135	Ala	Ile	Glu	Leu	Lys 140	Val	Lys	Gln	Gly
Ala 145	Glu	Asn	Met	Ile	Gln 150	Thr	Tyr	Ser	Asn	Gly 155	Ser	Thr	Lys	Asp	Arg 160
Lys	Leu	Leu	Leu	Thr 165	Ala	Gln	Gln	Met	Leu 170	Gln	Asp	Ser	Lys	Thr 175	Lys
Ile	Asp	Ile	Ile 180	Arg	Met	Gln	Leu	Arg 185	Arg	Ala	Leu	Gln	Ala 190	Asp	Gln
Leu	Glu	Asn 195	Gln	Ala	Ala	Pro	Asp 200	Asp	Thr	Gln	Gly	Ser 205	Pro	Asp	Leu
Gly	Ala 210	Val	Glu	Leu	Arg	Ile 215	Glu	Glu	Leu	Arg	His 220	His	Phe	Arg	Val
Glu 225	His	Ala	Val	Ala	Glu 230	Gly	Ala	Lys	Asn	Val 235	Leu	Arg	Leu	Leu	Ser 240
Ala	Ala	Lys	Ala	Pro 245	Asp	Arg	Lys	Ala	Val 250	Ser	Glu	Ala	Gln	Glu 255	Lys
Leu	Thr	Glu	Ser 260	Asn	Gln	Lys	Leu	Gly 265	Leu	Leu	Arg	Glu	Ala 270	Leu	Glu
Arg	Arg	Leu 275	Gly.	Glu	Leu	Pro	Ala 280	Asp	His	Pro	Lys	Gly 285	Arg	Leu	Leu
Arg	Glu 290	Glu	Leu	Ala	Ala	Ala 295	Ser	Ser	Ala	Ala	Phe 300	Ser	Thr	Arg	Leu
Ala 305	Gly	Pro	Phe	Pro	Ala 310	Thr	His	Tyr	Ser	Thr 315	Leu	Cys	Lys	Pro	Ala 320
Pro	Leu	Thr	Gly	Thr 325	Leu	Glu	Val	Arg	Val 330	Val	Gly	Cys	Arg	Asp 335	Leu
Pro	Glu	Thr	Ile 340	Pro	Trp	Asn	Pro	Thr 345	Pro	Ser	Met	Gly	Gly 350	Pro	Gly
Thr	Pro	Asp 355	Ser	Arg	Pro	Pro	Phe 360	Leu	Ser	Arg	Pro	Ala 365	Arg	Gly	Leu
Tyr	Ser 370	Arg	Ser	Gly	Ser	Leu 375	Ser	Gly	Arg	Ser	Ser 380	Leu	Lys	Ala	Glu
Ala 385	Glu	Asn	Thr	Ser	Glu 390	Val	Ser	Thr	Val	Leu 395	Lys	Leu	Asp	Asn	Thr 400
Val	Val	Gly	Gln	Thr 405	Ser	Trp	Lys	Pro	Cys 410	Gly	Pro	Asn	Ala	Trp 415	Asp
Gln	Ser	Phe	Thr	Leu	Glu	Leu	Glu	Arg	Ala	Arg	Glu	Leu	Glu	Leu	Ala

Val	Phe	Trp 435	Arg	Asp	Gln	Arg	Gly 440	Leu	Cys	Ala	Leu	Lys 445	Phe	Leu	Lys
Leu	Glu 450	Asp	Phe	Leu	Asp	Asn 455	Glu	Arg	His	Glu	Val 460	Gln	Leu	Asp	Met
Glu 465	Pro	Gln	Gly	Cys	Leu 470	Val	Ala	Glu	Val	Thr 475	Phe	Arg	Asn	Pro	Val 480
Ile	Glu	Arg	Ile	Pro 485	Arg	Leu	Arg	Arg	Gln 490	Lys	Lys	Ile	Phe	Ser 495	Lys
Gln	Gln	Gly	Lys 500	Ala	Phe	Gln	Arg	Ala 505	Arg	Gln	Met	Asn	Ile 510	Asp	Val
Ala	Thr	Trp 515	Val	Arg	Leu	Leu	Arg 520	Arg	Leu	Ile	Pro	Asn 525	Ala	Thr	Gly
Thr	Gly 530	Thr	Phe	Ser	Pro	Gly 535	Ala	Ser	Pro	Gly	Ser 540	Glu	Ala	Arg	Thr
Thr 545	Gly	Asp	Ile	Ser	Val 550	Glu	Lys	Leu	Asn	Leu 555	Gly	Thr	Asp	Ser	Asp 560
Ser	Ser	Pro	Gln	Lys 565	Ser	Ser	Arg	Asp	Pro 570	Pro	Ser	Ser	Pro	Ser 575	Ser
Leu	Ser	Ser	Pro 580	Ile	Gln	Glu	Ser	Thr 585	Ala	Pro	Glu	Leu	Pro 590	Ser	Glu
Thr	Gln	Glu 595	Thr	Pro	Gly	Pro	Ala 600	Leu	Cys	Ser	Pro	Leu 605	Arg	Lys	Ser
Pro	Leu 610	Thr	Leu	Glu	Asp	Phe 615	Lys	Phe	Leu	Ala	Val 620	Leu	Gly	Arg	Gly
His 625	Phe	Gly	Lys	Val	Leu 630	Leu	Ser	Glu	Phe	Arg 635	Pro	Ser	Gly	Glu	Leu 640
Phe	Ala	Ile	Lys	Ala 645	Leu	Lys	Lys	Gly	Asp 650	Ile	Val	Ala	Arg	Asp 655	Glu
Val	Glu	Ser	Leu 660	Met	Cys	Glu	Lys	Arg 665	Ile	Leu	Ala	Ala	Val 670	Thr	Ser
Ala	Gly	His 675	Pro	Phe	Leu	Val	Asn 680	Leu	Phe	Gly	Cys	Phe 685	Gln	Thr	Pro
Glu	His 690	Val	Cys	Phe	Val	Met 695	Glu	Tyr	Ser	Ala	Gly 700	Gly	Asp	Leu	Met
Leu 705	His	Ile	His	Ser	Asp 710	Val	Phe	Ser	Glu	Pro 715	Arg	Ala	Ile	Phe	Tyr 720
Ser	Ala	Cys	Arg	Leu	Pro	Pro	Pro	Phe	Val	Pro	Thr	Leu	Ser	Gly	Arg

Thr Asp Val Ser Asn Phe Asp Glu Glu Phe Thr Gly Glu Ala Pro Thr 740 745 750

Leu Ser Pro Pro Arg Asp Ala Arg Pro Leu Thr Ala Ala Glu Gln Ala
755 760 765

Ala Phe Leu Asp Phe Asp Phe Val Ala Gly Gly Cys
770 775 780

<210> 145

<211> 401

<212> PRT

<213> Homo sapiens

<400> 145

Met Ala Ser Asp Ala Val Gln Ser Glu Pro Arg Ser Trp Ser Leu Leu 1 5 10 15

Glu Gln Leu Gly Leu Ala Gly Ala Asp Leu Ala Ala Pro Gly Val Gln
20 25 30

Gln Gln Leu Glu Leu Glu Arg Glu Arg Leu Arg Arg Glu Ile Arg Lys
35 40 45

Glu Leu Lys Leu Lys Glu Gly Ala Glu Asn Leu Arg Arg Ala Thr Thr 50 55 60

Asp Leu Gly Arg Ser Leu Gly Pro Val Glu Leu Leu Leu Arg Gly Ser 65 70 75 80

Ser Arg Arg Leu Asp Leu Leu His Gln Gln Leu Gln Glu Leu His Ala 85 90 95

His Val Val Leu Pro Asp Pro Ala Ala Thr His Asp Gly Pro Gln Ser 100 105 110

Pro Gly Ala Gly Gly Pro Thr Cys Ser Ala Thr Asn Leu Ser Arg Val 115 120 125

Ala Gly Leu Glu Lys Gln Leu Ala Ile Glu Leu Lys Val Lys Gln Gly 130 135 140

Ala Glu Asn Met Ile Gln Thr Tyr Ser Asn Gly Ser Thr Lys Asp Arg 145 150 155 160

Lys Leu Leu Thr Ala Gln Gln Met Leu Gln Asp Ser Lys Thr Lys 165 170 175

Ile Asp Ile Ile Arg Met Gln Leu Arg Arg Ala Leu Gln Ala Asp Gln 180 185 190

Leu Glu Asn Gln Ala Ala Pro Asp Asp Thr Gln Gly Ser Pro Asp Leu 195 200 205

Gly Ala Val 210	Glu Leu Ar	J Ile Glu 215	Glu Leu A	rg His His 220	Phe Arg Val
Glu His Ala 225	Val Ala Gl 23	_	_	al Leu Arg 35	Leu Leu Ser 240
Ala Ala Lys	Ala Pro As 245	Arg Lys	Ala Val S 250	er Glu Ala	Gln Glu Lys 255
Leu Thr Glu	Ser Asn Gl 260	n Lys Leu	Gly Leu L 265	eu Arg Glu	Ala Leu Glu 270
Arg Arg Leu 275	Gly Glu Le	ı Pro Ala 280	Asp His P	ro Lys Gly 285	Arg Leu Leu
Arg Glu Glu 290	Leu Ala Al	a Ala Ser 295	Ser Ala A	la Phe Ser 300	Thr Arg Leu
Ala Gly Pro 305	Phe Pro Al			hr Leu Cys 15	Lys Pro Ala 320
Pro Leu Thr	Gly Thr Le 325	ı Glu Val	Arg Val V 330	al Gly Cys	Arg Asp Leu 335
Pro Glu Thr	Ile Pro Tr 340	Asn Pro	Thr Pro S 345	er Met Gly	Gly Pro Gly 350
Thr Pro Asp 355	Ser Arg Pr	Pro Phe 360	Leu Ser A	arg Pro Ala 365	Arg Gly Leu
Tyr Ser Arg 370	Ser Gly Se	r Leu Ser 375	Gly Arg S	er Ser Leu 380	Lys Ala Glu
Ala Glu Asn 385	Thr Ser Gl			eu Lys Leu 95	Asp Asn Thr 400
His					
<210> 146 <211> 96					
<212> PRT <213> Homo	sapiens				
<400> 146					
Met Gln Ser 1	Phe Leu Va 5	l Glu Gly	Arg Phe L	ys His Glu	Met Phe Glu 15
Lys Val Phe	Ala Glu Gl 20	ı Arg Asn	Gly Gly G 25	ln Arg Leu	Leu Cys Ala 30
Thr Asp Val	Pro Ile Ar	g Thr Val 40	Ser Ser A	ala Ala Ser 45	Gln Gly Leu
His Met Gln	Asn Asp As	o Ala Cys	Leu Gly A	ala Ala Ser	Pro Ser Ala

Ala Ser Trp Ser Arg Arg Ser Ala Glu Ser Lys Val Ser Leu Cys Trp 70 75 80

Lys Leu Lys Trp Lys Glu Asp Leu Val Trp Phe Tyr Ser Gln Ser His 85 90 95

<210> 147

<211> 333

<212> PRT

<213> Homo sapiens

<400> 147

Met His Arg Tyr Phe Glu Ser Pro Arg Arg Leu Leu Pro Val His Phe 1 5 10 15

Cys Cys Cys Gln Trp Arg Gly Gly Gly Val Asp Phe Glu Cys Leu Leu 20 25 30

Gly Gly Val Trp Asp Arg Cys Arg Lys Val Leu Arg Ala Gln Glu Cys 35 40 45

Glu Trp Pro Arg His Leu Pro Ser Ala Cys Leu Leu Ser Ser Ala Cys
50 55 60

Arg Gly Gln Pro Glu Arg Arg Ala Ala Val Val Gly Ala Gln Asp Pro 65 70 75 80

Thr Glu Pro Pro Arg Leu Ser Arg Ser Leu Ser Gly Ala Ser Pro Phe 85 90 95

Leu Gly Glu Thr Lys Gln Glu Thr Leu Thr Asn Ile Ser Ala Val Asn 100 105 110

Tyr Asp Phe Asp Glu Glu Tyr Phe Ser Asn Thr Ser Glu Leu Ala Lys 115 120 125

Asp Phe Ile Arg Arg Leu Leu Val Lys Asp Pro Lys Arg Arg Met Thr 130 135 140

Ile Ala Gln Ser Leu Glu His Ser Trp Ile Lys Ala Ile Arg Arg 145 150 155 160

Asn Val Arg Gly Glu Asp Ser Gly Arg Lys Pro Glu Arg Arg Leu 165 170 175

Lys Thr Thr Arg Leu Lys Glu Tyr Thr Ile Lys Ser His Ser Ser Leu 180 185 190

Pro Pro Asn Asn Ser Tyr Ala Asp Phe Glu Arg Phe Ser Lys Val Leu
195 200 205

Glu Glu Ala Ala Ala Glu Glu Gly Leu Arg Glu Leu Gln Arg Ser 210 215 220

Arg Arg Leu Cys His Glu Asp Val Glu Ala Leu Ala Ala Ile Tyr Glu

Glu Lys Glu Ala Trp Tyr Arg Glu Glu Ser Asp Ser Leu Gly Gln Asp 245 250 255

Leu Arg Arg Leu Arg Gln Glu Leu Leu Lys Thr Glu Ala Leu Lys Arg 260 265 270

Gln Ala Gln Glu Glu Ala Lys Gly Ala Leu Leu Gly Thr Ser Gly Leu 275 280 285

Lys Arg Arg Phe Ser Arg Leu Glu Asn Arg Tyr Glu Ala Leu Ala Lys 290 295 300

Gln Val Ala Ser Glu Met Arg Phe Val Gln Asp Leu Val Arg Ala Leu 305 310 315 320

Glu Gln Glu Lys Leu Gln Gly Val Glu Cys Gly Leu Arg 325 330

<210> 148

<211> 131

<212> PRT

<213> Homo sapiens

<400> 148

Met Leu Lys Glu Phe Leu Glu Ile Pro Phe Pro Thr Ser Pro Glu Cys
1 5 10 15

Thr Leu Gln Pro Lys Ser Gln Gln Pro Thr Gly Lys Glu Ala Glu Glu 20 25 30

His Pro Thr Ser Ala Pro Leu Thr His Ser Leu Leu Pro Pro Thr Pro 35 40 45

Leu Trp Val Val Ser His Phe Ile Phe Asp Phe Arg Gly Glu Thr Ala 50 55 60

Leu His Lys Ala Ala Cys Gln Arg Asn Arg Ala Val Cys Gln Leu Leu 65 70 75 80

Val Asp Ala Gly Ala Ser Leu Arg Lys Thr Asp Ser Lys Gly Lys Thr 85 90 95

Pro Gln Glu Arg Ala Gln Gln Ala Gly Asp Pro Asp Leu Ala Ala Tyr 100 105 110

Leu Glu Ser Arg Gln Asn Tyr Lys Val Ile Gly His Glu Asp Leu Glu 115 120 125

Thr Ala Val

<210> 149

<211> 272

<212> PRT

<213> Homo sapiens

<400> 149

Met Arg Gly Ala Ala Arg Leu Gly Arg Pro Gly Arg Ser Cys Leu Pro 1 5 10 15

Gly Pro Ala Leu Arg Ala Pro Pro Arg Pro Pro Leu Leu Leu Leu 20 25 30

Ala Leu Leu Pro Leu Leu Pro Ala Pro Gly Ala Ala Ala Pro Ala 35 40 45

Pro Arg Pro Pro Glu Leu Gln Ser Ala Ser Ala Gly Pro Ser Val Ser 50 55 60

Leu Tyr Leu Ser Glu Asp Glu Val Arg Arg Leu Ile Gly Leu Asp Ala 65 70 75 80

Glu Leu Tyr Tyr Val Arg Asn Asp Leu Ile Ser His Tyr Ala Leu Ser 85 90 95

Phe Ser Leu Leu Val Pro Ser Glu Thr Asn Phe Leu His Phe Thr Trp 100 105 110

His Ala Lys Ser Lys Val Glu Tyr Lys Leu Gly Phe Gln Val Asp Asn 115 120 125

Val Leu Ala Met Asp Met Pro Gln Val Asn Ile Ser Val Gln Gly Glu 130 135 140

Val Pro Arg Thr Leu Ser Val Phe Arg Val Glu Leu Ser Cys Thr Gly
145 150 155 160

Lys Val Asp Ser Glu Val Met Ile Leu Met Gln Leu Asn Leu Thr Val 165 170 175

Asn Ser Ser Lys Asn Phe Thr Val Leu Asn Phe Lys Arg Arg Lys Met 180 185 190

Cys Tyr Lys Lys Leu Glu Glu Val Lys Thr Ser Ala Leu Asp Lys Asn 195 200 205

Thr Ser Arg Thr Ile Tyr Asp Pro Val His Ala Ala Pro Thr Thr Ser 210 215 220

Thr Arg Val Phe Tyr Ile Ser Val Gly Val Cys Cys Ala Val Ile Phe 225 230 235 240

Leu Val Ala Ile Ile Leu Ala Val Leu His Leu His Ser Met Lys Arg 245 250 255

Ile Glu Leu Asp Asp Arg Tyr Cys Thr Tyr Phe Gly Lys Glu Lys Lys 260 265 270

<210> 150

<211> 344

<212> PRT

<213> Homo sapiens

<400> 150

Met Pro Gln Val Asn Ile Ser Val Gln Gly Glu Val Pro Arg Thr Leu
1 5 10 15

Ser Val Phe Arg Val Glu Leu Ser Cys Thr Gly Lys Val Asp Ser Glu 20 25 30

Val Met Ile Leu Met Gln Leu Asn Leu Thr Val Asn Ser Ser Lys Asn 35 40 45

Phe Thr Val Leu Asn Phe Lys Arg Arg Lys Met Cys Tyr Lys Lys Leu 50 55 60

Glu Glu Val Lys Thr Ser Ala Leu Asp Lys Asn Thr Ser Arg Thr Ile
65 70 75 80

Tyr Asp Pro Val His Ala Ala Pro Thr Thr Ser Thr Arg Val Phe Tyr 85 90 95

Ile Ser Val Gly Val Cys Cys Ala Val Ile Phe Leu Val Ala Ile Ile 100 105 110

Leu Ala Val Leu His Leu His Ser Met Lys Arg Ile Glu Leu Asp Asp 115 120 125

Ser Ile Ser Ala Ser Ser Ser Ser Gln Gly Leu Ser Gln Pro Ser Thr 130 135 140

Gln Thr Thr Gln Tyr Leu Arg Ala Asp Thr Pro Asn Asn Ala Thr Pro 145 150 155 160

Ile Thr Ser Ser Tyr Tyr Pro Thr Leu Arg Ile Glu Lys Asn Asp Leu 165 170 175

Arg Ser Val Thr Leu Leu Glu Ala Lys Gly Lys Val Lys Asp Ile Ala 180 185 190

Ile Ser Arg Glu Arg Ile Thr Leu Lys Asp Val Leu Gln Glu Gly Thr
195 200 205

Phe Gly Arg Ile Phe His Gly Ile Leu Ile Asp Glu Lys Asp Pro Asn 210 215 220

Lys Glu Lys Gln Ala Phe Val Lys Thr Val Lys Asp Gln Ala Ser Glu 225 230 235 240

Ile Gln Val Thr Met Met Leu Thr Glu Ser Cys Lys Leu Arg Gly Leu 245 250 255

His His Arg Asn Leu Leu Pro Ile Thr His Val Cys Ile Glu Gly 260 265 270

Glu Lys Pro Met Val Ile Leu Pro Tyr Met Asn Trp Gly Asn Leu Lys

275 280 285

Leu Phe Leu Arg Gln Cys Lys Leu Val Glu Ala Asn Asn Pro Gln Ala 290 295 300

Ile Ser Gln Gln Asp Leu Val His Met Ala Ile Gln Ile Ala Cys Gly 305 310 315 320

Met Ser Tyr Leu Ala Arg Glu Val Ile His Lys Asp Leu Ala Ala 325 330 335

Arg Asn Cys Val Gly Pro Leu Glu 340

<210> 151

<211> 141

<212> PRT

<213> Homo sapiens

<400> 151

Met Glu Ala Ile Arg Thr Asp Asn Gln Asn Phe Ala Ser Gln Leu Arg 1 5 10 15

Glu Ala Glu Ala Arg Asn Arg Asp Leu Glu Ala His Val Arg Gln Leu 20 25 30

Gln Glu Arg Met Glu Leu Leu Gln Ala Glu Gly Ala Thr Ala Val Thr 35 40 45

Gly Val Pro Ser Pro Arg Ala Thr Asp Pro Pro Ser His Leu Asp Gly 50 55 60

Pro Pro Ala Val Ala Val Gly Gln Cys Pro Leu Val Gly Pro Gly Pro 65 70 75 80

Met His Arg Arg His Leu Leu Leu Pro Ala Arg Val Pro Arg Pro Gly 85 90 95

Leu Ser Glu Ala Leu Ser Leu Leu Leu Phe Ala Val Val Leu Ser Arg
100 105 110

Ala Ala Ala Leu Gly Cys Ile Gly Leu Val Ala His Ala Gly Gln Leu 115 120 125

Thr Ala Val Trp Arg Arg Pro Gly Ala Ala Arg Ala Pro 130 135 140

<210> 152

<211> 106

<212> PRT

<213> Homo sapiens

<400> 152

Met Glu Leu Leu Gln Ala Glu Gly Ala Thr Ala Val Thr Gly Val Pro 1 5 10 15 Ser Pro Arg Ala Thr Asp Pro Pro Ser His Leu Asp Gly Pro Pro Ala 20 25 30

Val Ala Val Gly Gln Cys Pro Leu Val Gly Pro Gly Pro Met His Arg 35 40 45

Arg His Leu Leu Leu Pro Ala Arg Val Pro Arg Pro Gly Leu Ser Glu
50 . 55 60

Ala Leu Ser Leu Leu Phe Ala Val Val Leu Ser Arg Ala Ala Ala 65 70 75 80

Leu Gly Cys Ile Gly Leu Val Ala His Ala Gly Gln Leu Thr Ala Val 85 90 95

Trp Arg Arg Pro Gly Ala Ala Arg Ala Pro 100 105

<210> 153

<211> 50

<212> PRT

<213> Homo sapiens

<400> 153

Met Val Asn Leu Ser His Glu Asp Phe Glu Phe Ile Ser Gly Thr Arg
1 5 10 15

Met Arg Lys Leu Ala Arg Glu Gly Gln Lys Pro Pro Glu Gly Phe Met 20 25 30

Ala Pro Lys Ala Trp Thr Val Leu Thr Glu Tyr Tyr Lys Ser Leu Glu 35 40 45

Lys Ala 50

<210> 154

<211> 238

<212> PRT

<213> Homo sapiens

<400> 154

Met Ala Arg Thr Thr Ser Gln Leu Tyr Asp Ala Val Pro Ile Gln Ser 1 5 10 15

Ser Val Val Leu Cys Ser Cys Pro Ser Pro Ser Met Val Arg Thr Gln 20 25 30

Thr Glu Ser Ser Thr Pro Pro Gly Ile Pro Gly Gly Ser Arg Gln Gly 35 40 45

Pro Ala Met Asp Gly Thr Ala Ala Glu Pro Arg Pro Gly Ala Gly Ser 50 55 60

Leu Gln His Ala Gln Pro Pro Pro Gln Pro Arg Lys Lys Arg Pro Glu 65 70 75 80

Asp Phe Lys Phe Gly Lys Ile Leu Gly Glu Gly Ser Phe Ser Thr Val 85 90 95

Val Leu Ala Arg Glu Leu Ala Thr Ser Arg Glu Tyr Ala Ile Lys Ile 100 105 110

Leu Glu Lys Arg His Ile Ile Lys Glu Asn Lys Val Pro Tyr Val Thr 115 120 125

Arg Glu Arg Asp Val Met Ser Arg Leu Asp His Pro Phe Phe Val Lys
130 135 140

Leu Tyr Phe Thr Phe Gln Asp Asp Glu Lys Leu Tyr Phe Gly Leu Ser 145 150 155 160

Tyr Ala Lys Asn Gly Glu Leu Leu Lys Tyr Ile Arg Lys Ile Gly Ser 165 170 175

Phe Asp Glu Thr Cys Thr Arg Phe Tyr Thr Ala Glu Ile Val Ser Ala 180 185 190

Leu Glu Tyr Leu His Gly Lys Gly Ile Ile His Arg Asp Leu Lys Pro 195 200 205

Glu Asn Ile Leu Leu Asn Glu Asp Met His Ile Gln Ile Thr Asp Phe 210 215 220

Gly Thr Ala Lys Val Leu Ser Pro Glu Ser Lys Gln Val Cys 225 235 235

<210> 155

<211> 73

<212> PRT

<213> Homo sapiens

<400> 155

Met Ser Asp Val Thr Ile Val Lys Glu Gly Trp Val Gln Lys Arg Gly
1 5 10 15

Glu Tyr Ile Lys Asn Trp Arg Pro Arg Tyr Phe Leu Leu Lys Thr Asp 20 25 30

Gly Ser Phe Ile Gly Tyr Lys Glu Lys Pro Gln Asp Val Asp Leu Pro

Tyr Pro Leu Asn Asn Phe Ser Val Ala Ser Ser Val Met Phe Arg Tyr 50 55 60

Leu Gln Asn Leu Thr Leu Asn Gln Val 65 70

<210> 156

<211> 213

<212> PRT

<213> Homo sapiens

<400> 156

Met Ser Asp Val Thr Ile Val Lys Glu Gly Trp Val Gln Lys Arg Gly
1 5 10 15

Glu Tyr Ile Lys Asn Trp Arg Pro Arg Tyr Phe Leu Leu Lys Thr Asp 20 25 30

Gly Ser Phe Ile Gly Tyr Lys Glu Lys Pro Gln Asp Val Asp Leu Pro 35 40 45

Tyr Pro Leu Asn Asn Phe Ser Val Ala Lys Cys Gln Leu Met Lys Thr 50 55 60

Glu Arg Pro Lys Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp Thr 65 70 75 80

Thr Val Ile Glu Arg Thr Phe His Val Asp Thr Pro Glu Glu Arg Glu 85 90 95

Glu Trp Thr Glu Ala Ile Gln Ala Val Ala Asp Arg Leu Gln Arg Gln
100 105 110

Glu Glu Glu Arg Met Asn Cys Ser Pro Thr Ser Gln Ile Asp Asn Ile 115 120 125

Gly Glu Glu Met Asp Ala Ser Thr Thr His His Lys Arg Lys Thr 130 135 140

Met Asn Asp Phe Asp Tyr Leu Lys Leu Leu Gly Lys Gly Thr Phe Gly 145 150 155 160

Lys Val Ile Leu Val Arg Glu Lys Ala Ser Gly Lys Tyr Tyr Ala Met 165 170 175

Lys Ile Leu Lys Lys Glu Val Ile Ile Ala Lys Val Thr Asp Leu Leu 180 185 190

Lys Leu Ile Thr Lys Phe Leu Phe Ala Val Cys Met Cys Leu Trp Ala 195 200 205

His Glu Phe Thr Cys 210

<210> 157

<211> 352

<212> PRT

<213> Homo sapiens

<400> 157

Met Gly Gly Lys Pro Ala Asn Arg Met Met Pro Tyr Pro Phe Pro Ser 1 5 10 15

- Gly Thr Trp Lys Val Lys Trp Val Ala Ser Arg Asn Ala Phe Lys Pro 20 25 30
- Arg Ile Gly Ile Leu Ile Lys Thr Leu Ile Tyr Ser Ser Gln Phe Pro 35 40 45
- Leu Gly Asn Leu Glu Lys Ile Ser Gln Leu Leu Ser Lys Ser Ala Gln 50 55 60
- Cys Pro Leu Arg Val His Tyr Leu Ser Ser Gln Tyr Gly Asp Glu Arg 65 70 75 80
- Cys Phe Met Phe Val Leu Ile Ser Pro Thr Lys Ser Val Ile Ile Thr 85 90 95
- Ile Leu Ser Leu Leu Phe Thr Leu Gln Leu Phe Phe His Leu Ser Arg
 100 105 110
- Glu Arg Val Phe Ser Glu Asp Arg Thr Arg Phe Tyr Gly Ala Glu Ile 115 120 125
- Val Ser Ala Leu Asp Tyr Leu His Ser Gly Lys Ile Val Tyr Arg Asp 130 135 140
- Leu Lys Leu Glu Asn Leu Met Leu Asp Lys Asp Gly His Ile Lys Ile 145 150 155 160
- Thr Asp Phe Gly Leu Cys Lys Glu Gly Ile Thr Asp Ala Ala Thr Met 165 170 175
- Lys Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Leu Glu 180 \ 185 190
- Asp Asn Asp Tyr Gly Arg Ala Val Asp Trp Trp Gly Leu Gly Val Val
 195 200 205
- Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr Asn Gln Asp His 210 215 220
- Glu Lys Leu Phe Glu Leu Ile Leu Met Glu Asp Ile Lys Phe Pro Arg 225 230 235 240
- Thr Leu Ser Ser Asp Ala Lys Ser Leu Leu Ser Gly Leu Leu Ile Lys 245 250 255
- Asp Pro Asn Lys Arg Leu Gly Gly Gly Pro Asp Asp Ala Lys Glu Ile 260 265 270
- Met Arg His Ser Phe Phe Ser Gly Val Asn Trp Gln Asp Val Tyr Asp 275 280 285
- Lys Lys Leu Val Pro Pro Phe Lys Pro Gln Val Thr Ser Glu Thr Asp 290 295 300
- Thr Arg Tyr Phe Asp Glu Glu Phe Thr Ala Gln Thr Ile Thr 305 310 315 320

Pro Pro Glu Lys Tyr Asp Glu Asp Gly Met Asp Cys Met Asp Asn Glu 325 330 335

Arg Arg Pro His Phe Pro Gln Phe Ser Tyr Ser Ala Ser Gly Arg Glu 340 345 350

<210> 158

<211> 132

<212> PRT

<213> Homo sapiens

<400> 158

Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys

1 10 15

Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asn Ser Lys Lys 20 25 30

Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln 35 40 45

Ala Gln Val Pro Pro Ala Ala Pro His His His His His Ser His 50 55 60

Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys 65 70 75 80

Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys 85 90 95

Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile 100 105 110

Ile Pro His Ser Arg Val Ala Lys Pro His Gln Arg Glu Lys Val Cys 115 120 125

Met Thr Leu Glu 130

<210> 159

<211> 192

<212> PRT

<213> Homo sapiens

<400> 159

Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys

1 10 15

Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asn Ser Lys Lys
20 25 30

Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln
35 40 45

Ala Gln Val Pro Pro Ala Ala Pro His His His His His Ser His

60

50

Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys 70 75 80

55

Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys 85 90 95

Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile 100 105 110

Ile Pro His Ser Arg Val Ala Lys Pro His Gln Arg Glu Lys Ile Asp 115 120 125

Lys Glu Ile Glu Leu His Arg Ile Leu His His Lys His Val Val Gln 130 135 140

Phe Tyr His Tyr Phe Glu Asp Lys Glu Asn Ile Tyr Ile Leu Leu Glu 145 150 155 160

Tyr Cys Ser Arg Arg Val Ser Val Asn Ser Tyr Leu Arg Thr Phe Ala 165 170 175

Tyr Pro Glu Leu Thr Trp Tyr Ser Lys Ser Ile Leu Ser Gly Ile Thr 180 185 190

<210> 160

<211> 207

<212> PRT

<213> Homo sapiens

<400> 160

Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys
1 5 10 15

Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asn Ser Lys Lys 20 25 30

Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln 35 40 45

Ala Gln Val Pro Pro Ala Ala Pro His His His His His Ser His
50 55 60

Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys 70 75 80

Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys
85 90 95

Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile 100 105 110

Ile Pro His Ser Arg Val Ala Lys Pro His Gln Arg Glu Lys Ile Asp 115 120 125 Lys Glu Ile Glu Leu His Arg Ile Leu His His Lys His Val Val Gln 130 Phe Tyr His Tyr Phe Glu Asp Lys Glu Asn Ile Tyr Ile Leu Leu Glu Tyr Cys Ser Arg Arg Leu Gln Gly Ser Gln Lys Asn Asp Leu Glu Tyr 170 Val Glu Glu Asp Gly His Val Val Arg Lys Gln Phe Pro Cys Gly Leu Leu Asp Trp Val Glu Pro Glu Gln Ala Lys Ala Tyr Ser Ser 200 <210> 161 <211> 337 <212> PRT <213> Homo sapiens <400> 161 Met Ser Asp Lys Asp Leu Arg Thr Ala Ala Ala Gly Gly His Leu 5 Val Ala Ile Leu Thr Val Phe Ile Pro Gln Lys Asp Leu Val Glu Glu Glu Ala Glu Glu Ala Gly Val Ala Leu Arg Ser Thr Gln Ser Thr Leu Gln Ala Gly Leu Ala Ala Asp Ala Trp Ala Ala Pro Ile Ala Met Gln Ile Tyr Lys Lys His Leu Asp Pro Arg Pro Gly Pro Cys His Leu Ser Trp Ala Trp Ala Trp Ala Ser Trp Pro Ala Ala Ala Cys Thr Ala Gly Pro Lys Gly Arg Pro Pro Met Thr Gln Val Tyr Glu Arg Leu Glu Lys Leu Gln Ala Val Val Ala Gly Val Pro Gly His Leu Glu Ala Ala Ser 120 Cys Ile Pro Phe Pro Gln Glu Asn Ser Tyr Val Ser Ser Thr Gly Arg 130 135 Ala Ser Ala Gln Ala Ala Glu Gln Leu Gln Arg Gly Pro Asn Gln Pro Val Glu Ser Asp Glu Ser Leu Gly Gly Leu Ser Ala Ala Leu Arg Ser 170

Trp His Leu Thr Pro Ser Cys Pro Leu Asp Pro Ala Pro Leu Arg Glu

185

180

Ala Gly Cys Pro Gln Gly Asp Thr Ala Gly Glu Ser Ser Trp Gly Ser 195

Gly Pro Gly Ser Arg Pro Thr Ala Val Glu Gly Leu Ala Leu Gly Ser 210

Ser Ala Ser Ser Ser Glu Pro Pro Gln Ile Ile Ile Asn Pro Ala 225 230 235 240

Arg Gln Lys Met Val Gln Lys Leu Ala Leu Tyr Glu Asp Gly Ala Leu 245 250 255

Asp Ser Leu Gln Leu Leu Ser Ser Ser Ser Leu Pro Gly Leu Gly Leu 260 265 270

Glu Gln Asp Arg Gln Gly Pro Lys Lys Val Met Asn Phe Arg Ala Asp 275 280 285

Val Phe Thr Trp Ala Asp Pro Pro Asn Pro Glu Val Lys Val Leu Met 290 295 300

Val Arg Ser Ser His Gly Ala Arg Val Leu Ser Thr Leu Pro Ala Val 305 310 315 320

Gly Val Gly Ala His Ala Arg Trp Gly Glu Lys Glu Val Ala Leu Leu 325 330 335

Phe

<210> 162

<211> 122

<212> PRT

<213> Homo sapiens

<400> 162

Met Gly His Ala Leu Cys Val Cys Ser Arg Gly Thr Val Ile Ile Asp 1 5 10 15

Asn Lys Arg Tyr Leu Phe Ile Gln Lys Leu Gly Glu Gly Gly Phe Ser 20 25 30

Tyr Val Asp Leu Val Glu Gly Leu His Asp Gly His Phe Tyr Ala Leu 35 40 45

Lys Arg Ile Leu Cys His Glu Gln Gln Asp Arg Glu Glu Ala Gln Arg 50 55 60

Glu Ala Asp Met His Arg Leu Phe Asn His Pro Asn Ile Leu Arg Leu 65 70 75 80

Val Ala Tyr Cys Leu Arg Glu Arg Gly Ala Lys His Glu Ala Trp Leu 85 90 95

Leu Leu Pro Phe Phe Lys Val Arg Lys Thr Pro Val Tyr Gly Gly Gly

Cys Ser Arg Ala Thr Tyr Ser Arg Ala Val 115 120

<210> 163

<211> 842

<212> PRT

<213> Homo sapiens

<400> 163

Met Glu Arg Ala Ile Ser Pro Gly Leu Leu Val Arg Ala Leu Leu Leu 1 5 10 15

Leu Leu Leu Gly Leu Ala Ala Arg Thr Val Ala Ala Gly Arg Ala 20 25 30

Arg Gly Leu Pro Ala Pro Thr Ala Glu Ala Ala Phe Gly Leu Gly Ala 35 40 45

Ala Ala Pro Thr Ser Ala Thr Arg Val Pro Ala Ala Gly Ala Val 50 55 60

Ala Ala Ala Glu Val Thr Val Glu Asp Ala Glu Ala Leu Pro Ala Ala 65 70 75 80

Ala Gly Glu Glu Pro Arg Gly Pro Glu Pro Asp Asp Glu Thr Glu 85 90 95

Leu Arg Pro Arg Gly Arg Ser Leu Val Ile Ile Ser Thr Leu Asp Gly
100 105 110

Arg Ile Ala Ala Leu Asp Pro Glu Asn His Gly Lys Lys Gln Trp Asp 115 120 125

Leu Asp Val Gly Ser Gly Ser Leu Val Ser Ser Ser Leu Ser Lys Pro 130 135 140

Glu Val Phe Gly Asn Lys Met Ile Ile Pro Ser Leu Asp Gly Ala Leu 145 150 155 160

Phe Gln Trp Asp Arg Asp Arg Glu Ser Met Glu Thr Val Pro Phe Thr 165 170 175

Val Glu Ser Leu Leu Glu Ser Ser Tyr Lys Phe Gly Asp Asp Val Val 180 185 190

Leu Val Gly Gly Lys Ser Leu Thr Thr Tyr Gly Leu Ser Ala Tyr Ser 195 200 205

Gly Lys Val Arg Tyr Ile Cys Ser Ala Leu Gly Cys Arg Gln Trp Asp 210 215 220

Ser Asp Glu Met Glu Gln Glu Glu Asp Ile Leu Leu Gln Arg Thr 225 230 235 240 Gln Lys Thr Val Arg Ala Val Gly Pro Arg Ser Gly Asn Glu Lys Trp Asn Phe Ser Val Gly His Phe Glu Leu Arg Tyr Ile Pro Asp Met Glu 265 Thr Arg Ala Gly Phe Ile Glu Ser Thr Phe Lys Pro Asn Glu Asn Thr Glu Glu Ser Lys Ile Ile Ser Asp Val Glu Glu Gln Glu Ala Ala Ile Met Asp Ile Val Ile Lys Val Ser Val Ala Asp Trp Lys Val Met Ala Phe Ser Lys Lys Gly Gly His Leu Glu Trp Glu Tyr Gln Phe Cys Thr Pro Ile Ala Ser Ala Trp Leu Leu Lys Asp Gly Lys Val Ile Pro Ile 345 Ser Leu Phe Asp Asp Thr Ser Tyr Thr Ser Asn Asp Asp Val Leu Glu 360 Asp Glu Glu Asp Ile Val Glu Ala Ala Arg Gly Ala Thr Glu Asn Ser 370 380 Val Tyr Leu Gly Met Tyr Arg Gly Gln Leu Tyr Leu Gln Ser Ser Val 390 Arg Ile Ser Glu Lys Phe Pro Ser Ser Pro Lys Ala Leu Glu Ser Val 410 Thr Asn Glu Asn Ala Ile Ile Pro Leu Pro Thr Ile Lys Trp Lys Pro 420 Leu Ile His Ser Pro Ser Arg Thr Pro Val Leu Val Gly Ser Asp Glu Phe Asp Lys Cys Leu Ser Asn Asp Lys Phe Ser His Glu Glu Tyr Ser 450 455 Asn Gly Ala Leu Ser Ile Leu Gln Tyr Pro Tyr Asp Asn Gly Tyr Tyr 470 Leu Pro Tyr Tyr Lys Arg Glu Arg Asn Lys Arg Ser Thr Gln Ile Thr 490 Val Arg Phe Leu Asp Asn Pro His Tyr Asn Lys Asn Ile Arg Lys Lys 500 Asp Pro Val Leu Leu His Trp Trp Lys Glu Ile Val Ala Thr Ile

520

535

Leu Phe Cys Ile Ile Ala Thr Thr Phe Ile Val Arg Arg Leu Phe His

545	HIS	Pro	HIS	arg	550	Arg	ьуs	GIU	ser	555	inr	GIII	Cys	GIII	560
Glu	Asn	Lys	Tyr	Asp 565	Ser	Val	Ser	Gly	Glu 570	Ala	Asn	Asp	Ser	Ser 575	Trp
Asn	Asp	Ile	Lys 580	Asn	Ser	Gly	Tyr	Ile 585	Ser	Arg	Tyr	Leu	Thr 590	Asp	Phe
Glu	Pro	Ile 595	Gln	Cys	Leu	Gly	Arg 600	Gly	Gly	Phe	Gly	Val 605	Val	Phe	Glu
Ala	Lys 610	Asn	Lys	Val	Asp	Asp 615	Cys	Asn	Tyr	Ala	Ile 620	Lys	Arg	Ile	Arg
Leu 625	Pro	Asn	Arg	Glu	Leu 630	Ala	Arg	Glu	Lys	Val 635	Met	Arg	Glu	Val	Lys 640
Ala	Leu	Ala	Lys	Leu 645	Glu	His	Pro	Gly	Ile 650	Val	Arg	Tyr	Phe	Asn 655	Ala
Trp	Leu	Glu	Ala 660	Pro	Pro	Glu	Lys	Trp 665	Gln	Glu	Lys	Met	Asp 670	Glu	Ile
Trp	Leu	Lys 675	Asp	Glu	Ser	Thr	Asp 680	Trp	Pro	Leu	Ser	Ser 685	Pro	Ser	Pro
Met	Asp 690	Ala	Pro	Ser	Val	Lys 695	Ile	Arg	Arg	Met	Asp 700	Pro	Phe	Ser	Thr
Lys 705	Glu	His	Ile	Glu	Ile 710	Ile	Ala	Pro	Ser	Pro 715	Gln	Arg	Ser	Arg	Ser 720
Phe	Ser	Val	Gly	Ile 725	Ser	Cys	Asp	Gln	Thr 730	Ser	Ser	Ser	Glu	Ser 735	Gln
Phe	Ser	Pro	Leu 740	Glu	Phe	Ser	Gly	Met 745	Asp	His	Glu	Asp	Ile 750	Ser	Glu
		755				Asn	760		_			765		_	
-	770		-	_		Met 775	_	-		_	780	_			
Glu 785	Leu	Cys	Pro	Ser	Glu 790	Ala	Ser	Pro	Tyr	Val 795	Arg	Ser	Arg	Glu	Arg 800
Thr	Ser	Ser	Ser	Ile 805	Val	Phe	Glu	Asp	Ser 810	Gly	Cys	Asp	Asn	Ala 815	Ser
Ser	Lys	Glu	Glu 820	Pro	Lys	Thr	Asn	Arg 825	Leu	His	Ile	Gly	Asn 830	His	Cys
Ala	Asn	Lys 835	Leu	Thr	Val	Thr	Val 840	Leu	Phe						

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<210> 164
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<211> 743

<212> PRT

<213> Homo sapiens

<400> 164

Met Gly Ser Arg Ala Gln Lys Ser Ala Gly Asn Ala Glu Leu Trp Glu
1 5 10 15

Pro Leu Pro Glu Gly Arg Pro Arg Pro Ala Gly Thr Ser Ser Ala Val 20 25 30

Ser Ala Trp Ala Ser Leu Lys Leu Cys Leu Arg Gly Gly Ser Gly Arg 35 40 45

Arg Gln Arg Leu Gly Gly Gly Arg Met Gln Pro Glu Glu Gly His Arg
50 55 60

Leu Ala Ala Gly Ala Ala Val Arg Gly Ala Ala Ala Thr Val Leu Leu 65 70 75 80

Arg Leu Arg Asp Asp Leu Asn Val Thr Arg Leu Ser His Phe Glu Tyr
85 90 95

Val Lys Asn Glu Asp Leu Glu Lys Ile Gly Met Gly Arg Pro Gly Gln
100 105 110

Arg Arg Leu Trp Glu Ala Val Lys Arg Arg Lys Ala Leu Cys Lys Arg 115 120 125

Lys Ser Trp Met Asn Lys Val Phe Ser Gly Lys Arg Leu Glu Ala Glu 130 135 140

Phe Pro Pro His His Ser Gln Ser Thr Phe Arg Lys Thr Ser Pro Ala 145 150 155 160

Pro Gly Gly Pro Ala Gly Glu Gly Pro Leu Gln Ser Leu Thr Cys Leu 165 170 175

Ile Gly Glu Lys Asp Leu Arg Leu Leu Glu Lys Leu Gly Asp Gly Ser 180 185 190

Phe Gly Val Val Arg Arg Gly Glu Trp Asp Ala Pro Ser Gly Lys Thr 195 200 205

Val Ser Pro Pro Gln Pro Ala Phe Phe Thr Gln Lys Pro Thr Tyr Asp 210 215 220

Pro Val Ser Glu Asp Gln Asp Pro Leu Ser Ser Asp Phe Lys Arg Leu 225 230 235 240

Gly Leu Arg Lys Pro Gly Leu Pro Arg Gly Leu Trp Leu Ala Lys Pro 245 250 255

Ser Ala Arg Val Pro Gly Thr Lys Ala Ser Arg Gly Ser Gly Ala Glu 260 265 270

Val	Thr	Leu 275	Ile	Asp	Phe	Gly	Glu 280	Glu	Pro	Val	Val	Pro 285	Ala	Leu	Arg
Pro	Cys 290	Ala	Pro	Ser	Leu	Ala 295	Gln	Leu	Ala	Met	Asp 300	Ala	Cys	Ser	Leu
Leu 305	Asp	Glu	Thr	Pro	Pro 310.		Ser	Pro	Thr	Arg 315	Ala	Leu	Pro	Arg	Pro 320
Leu	His	Pro	Thr	Pro 325	Val	Val	Asp	Trp	Asp 330	Ala	Arg	Pro	Leu	Pro 335	Pro
Pro	Pro	Ala	Tyr 340	Asp	Asp	Val	Ala	Gln 345	Asp	Glu	Asp	Asp	Phe 350	Glu	Ile
Cys	Ser	Ile 355	Asn	Ser	Thr	Leu	Val 360	Gly	Ala	Gly	Val	Pro 365	Ala	Gly	Pro
Ser	Gln 370	Gly	Gln	Thr	Asn	Tyr 375	Ala	Phe	Val	Pro	Glu 380	Gln	Ala	Arg	Pro
Pro 385	Pro	Pro	Leu	Glu	Asp 390	Asn	Leu	Phe	Leu	Pro 395	Pro	Gln	Gly	Gly	Gly 400
Lys	Pro	Pro	Ser	Ser 405	Ala	Gln	Thr	Ala	Glu 410	Ile	Phe	Gln	Ala	Leu 415	Gln
Gln	Glu	Cys	Met 420	Arg	Gln	Leu	Gln	Ala 425	Pro	Ala	Gly	Ser	Pro 430	Ala	Pro
Ser	Pro	Ser 435	Pro	Gly	Gly	Asp	Asp 440	Lys	Pro	Gln	Val	Pro 445	Pro	Arg	Val
Pro	Ile 450	Pro	Pro	Arg	Pro	Thr 455	Arg	Pro	His	Val	Gln 460	Leu	Ser	Pro	Ala
Pro 465	Pro	Gly	Glu	Glu	Glu 470	Thr	Ser	Gln	Trp	Pro 475	Gly	Pro	Ala	Ser	Pro 480
Pro	Arg	Val	Pro	Pro 485	Arg	Glu	Pro	Leu	Ser 490	Pro	Gln	Gly	Ser	Arg 495	Thr
Pro	Ser	Pro	Leu 500	Val	Pro	Pro	Gly	Ser 505	Ser	Pro	Leu	Pro	Pro 510	Arg	Leu
Ser	Ser	Ser 515	Pro	Gly	Lys	Thr	Met 520	Pro	Thr	Thr	Gln	Ser 525	Phe	Ala	Ser
Asp	Pro 530	Lys	Tyr	Ala	Thr	Pro 535	Gln	Val	Ile	Gln	Ala 540	Pro	Gly	Pro	Arg
Ala 545	Gly	Pro	Cys	Ile	Leu 550	Pro	Ile	Val	Arg	Asp 555	Gly	Lys	Lys	Val	Ser 560
Ser	Thr	His	Tyr	Tyr 565	Leu	Leu	Pro	Glu	Arg 570	Pro	Ser	Tyr	Leu	Glu 575	Arg

Tyr Gln Arg Phe Leu Arg Glu Ala Gln Ser Pro Glu Glu Pro Thr Pro 580 590

Leu Pro Val Pro Leu Leu Leu Pro Pro Pro Ser Thr Pro Ala Pro Ala 595 600 605

Ala Pro Thr Ala Thr Val Arg Pro Met Pro Gln Ala Ala Leu Asp Pro 610 615 620

Lys Ala Asn Phe Ser Thr Asn Asn Ser Asn Pro Gly Ala Arg Pro Pro 625 630 635 640

Pro Pro Arg Ala Thr Ala Arg Leu Pro Gln Arg Gly Cys Pro Gly Asp
645 650 655

Gly Pro Glu Ala Gly Arg Pro Ala Asp Lys Ile Gln Met Ala Met Val 660 665 670

His Gly Val Thr Thr Glu Glu Cys Gln Ala Ala Leu Gln Cys His Gly 675 680 685

Trp Ser Val Gln Arg Ala Cys Pro Val Ser Glu Gly Gly Ala Ala Leu 690 695 700

Arg Ala Gly Ser Ala Ala Gln Arg Glu Cys His Lys Val Leu Glu Met 705 710 715 720

Phe Asp Trp Asn Leu Glu Gln Ala Gly Cys His Leu Leu Gly Ser Trp
725 730 735

Gly Pro Ala His His Lys Arg 740

<210> 165

<211> 604

<212> PRT

<213> Homo sapiens

<400> 165

Met Ala Ser Asn Pro Glu Arg Gly Glu Ile Leu Leu Thr Glu Leu Gln
1 5 10 15

Gly Asp Ser Arg Ser Leu Pro Phe Ser Glu Asn Val Ser Ala Val Gln
20 25 30

Lys Leu Asp Phe Ser Asp Thr Met Val Gln Gln Lys Leu Asp Asp Ile 35 40 45

Lys Asp Arg Ile Lys Arg Glu Ile Arg Lys Glu Leu Lys Ile Lys Glu
50 55 60

Gly Ala Glu Asn Leu Arg Lys Val Thr Thr Asp Lys Lys Ser Leu Ala 65 70 75 80

Tyr Val Asp Asn Ile Leu Lys Lys Ser Asn Lys Leu Glu Glu Leu

90 95

His	His	Lys	Leu 100	Gln	Glu	Leu	Asn	Ala 105	His	Ile	Val	Val	Ser 110	Asp	Pro
Glu	Asp	Ile 115	Thr	Asp	Cys	Pro	Arg 120	Thr	Pro	Asp	Thr	Pro 125	Asn	Asn	Asp
Pro	Arg 130	Cys	Ser	Thr	Ser	Asn 135	Asn	Arg	Leu	Lys	Ala 140	Leu	Gln	Lys	Gln
Leu 145	Asp	Ile	Glu	Leu	Lys 150	Val	Lys	Gln	Gly	Ala 155	Glu	Asn	Met	Ile	Gln 160
Met	Tyr	Ser	Asn	Gly 165	Ser	Ser	Lys	Asp	Arg 170	Lys	Leu	His	Gly	Thr 175	Ala
Gln	Gln	Leu	Leu 180	Gln	Asp	Ser	Lys	Thr 185	Lys	Ile	Glu	Val	Ile 190	Arg	Met
Gln	Ile	Leu 195	Gln	Ala	Val	Gln	Thr 200	Asn	Glu	Leu	Ala	Phe 205	Asp	Asn	Ala
Lys	Pro 210	Val	Ile	Ser	Pro	Leu 215	Glu	Leu	Arg	Met	Glu 220	Glu	Leu	Arg	His
His 225	Phe	Arg	Ile	Glu	Phe 230	Ala	Val	Ala	Glu	Gly 235	Ala	Lys	Asn	Val	Met 240
-			-	245	_	-			250		Lys			255	
٠			260					265			Leu		270		
-		275			_		280				Lys	285			-
	290					295					Ala 300				
305			_		310					315	Asn				320
Leu	Ser	Lys	Pro	Ala 325	Ala	Leu	Thr	Gly	Thr 330	Leu	Glu	Val	Arg	Leu 335	Met
Gly	Cys	Gln	Asp 340	Ile	Leu	Glu	Asn	Val 345	Pro	Gly	Arg	Ser	Lys 350	Ala	Thr
Ser	Val	Ala 355	Leu	Pro	Gly	Trp	Ser 360	Pro	Ser	Glu	Thr	Arg 365	Ser	Ser	Phe
	370					375					Ser 380				
Lys	Thr	Asp	Asp	Leu	Ser	Asn	Asp	Val	Cys	Ala	Val	Leu	Lys	Leu	Asp

385	390	395	400
303	320	333	

Asn Thr Val Val Gly Gln Thr Ser Trp Lys Pro Ile Ser Asn Gln Ser 405 410 415

Trp Asp Gln Lys Phe Thr Leu Glu Leu Asp Arg Ser Arg Glu Leu Glu
420 425 430

Ile Ser Val Tyr Trp Arg Asp Trp Arg Ser Leu Cys Ala Val Lys Phe
435 440 445

Leu Arg Leu Glu Asp Phe Leu Asp Asn Gln Arg His Gly Met Cys Leu 450 455 460

Tyr Leu Glu Pro Gln Gly Thr Leu Phe Ala Glu Val Thr Phe Phe Asn 465 470 475 480

Pro Val Ile Glu Arg Arg Pro Lys Leu Gln Arg Gln Lys Lys Ile Phe 485 490 495

Ser Lys Gln Gln Gly Lys Thr Phe Leu Arg Ala Pro Gln Met Asn Ile 500 505 510

Asn Ile Ala Thr Trp Gly Arg Leu Val Arg Arg Ala Ile Pro Thr Val 515 520 525

Asn His Ser Gly Thr Phe Ser Pro Gln Ala Pro Val Pro Thr Thr Val 530 540

Pro Val Val Asp Val Arg Ile Pro Gln Leu Ala Pro Pro Ala Arg Tyr 545 550 555 560

Val Ser Glu Ile Leu Ser Ile Ser Tyr Thr Lys Leu Leu Gly His Ser 565 570 575

Tyr Val Leu Ile Ile Ala Gly Val Leu Ser Leu Ala Phe Phe Pro Ser 580 585 590

Ser Ile Leu Lys Val Val Phe Cys Leu Leu Lys Lys 595 600

<210> 166

<211> 613

<212> PRT

<213> Homo sapiens

<400> 166

Met Ala Ser Asn Pro Glu Arg Gly Glu Ile Leu Leu Thr Glu Leu Gln 1 5 10 15

Gly Asp Ser Arg Ser Leu Pro Phe Ser Glu Asn Val Ser Ala Val Gln 20 25 30

Lys Leu Asp Phe Ser Asp Thr Met Val Gln Gln Lys Leu Asp Asp Ile 35 40 45

Lys	Asp 50	Arg	Ile	Lys	Arg	Glu 55	Ile	Arg	Lys	Glu	Leu 60	Lys	Ile	Lys	Glu
Gly 65	Ala	Glu	Asn	Leu	Arg 70	Lys	Val	Thr	Thr	Asp 75	Lys	Lys	Ser	Leu	Ala 80
Tyr	Val	Asp	Asn	Ile 85	Leu	Lys	Lys	Ser	Asn 90	Lys	Lys	Leu	Glu	Glu 95	Leu
His	His	Lys	Leu 100	Gln	Glu	Leu	Asn	Ala 105	His	Ile	Val	Val	Ser 110	Asp	Pro
Glu	Asp	Ile 115	Thr	Asp	Cys	Pro	Arg 120	Thr	Pro	Asp	Thr	Pro 125	Asn	Asn	Asp
Pro	Arg 130	Cys	Ser	Thr	Ser	Asn 135	Asn	Arg	Leu	Lys	Ala 140	Leu	Gln	Lys	Gln
Leu 145	Asp	Ile	Glu	Leu	Lys 150	Val	Lys	Gln	Gly	Ala 155	Glu	Asn	Met	Ile	Gln 160
Met	Tyr	Ser	Asn	Gly 165	Ser	Ser	Lys	Asp	Arg 170	Lys	Leu	His	Gly	Thr 175	Ala
Gln	Gln	Leu	Leu 180	Gln	Asp	Ser	Lys	Thr 185	Lys	Ile	Glu	Val	Ile 190	Arg	Met
Gln	Ile	Leu 195	Gln	Ala	Val	Gln	Thr 200	Asn	Glu	Leu	Ala	Phe 205	Asp	Asn	Ala
Lys	Pro 210	Val	Ile	Ser	Pro	Leu 215	Glu	Leu	Arg	Met	Glu 220	Glu	Leu	Arg	His
His 225	Phe	Arg	Ile	Glu	Phe 230	Ala	Val	Ala	Glu	Gly 235	Ala	Lys	Asn	Val	Met 240
Lys	Leu	Leu	Gly	Ser 245	Gly	Lys	Val	Thr	Asp 250	Arg	Lys	Ala	Leu	Ser 255	Glu
Ala	Gln	Ala	Arg 260	Phe	Asn	Glu	Ser	Ser 265	Gln	Lys	Leu	Asp	Leu 270	Leu	Lys
Tyr	Ser	Leu 275	Glu	Gln	Arg	Leu	Asn 280	Glu	Val	Pro	Lys	Asn 285	His	Pro	Lys
Ser	Arg 290	Ile	Ile	Ile	Glu	Glu 295	Leu	Ser	Leu	Val	Ala 300	Ala	Ser	Pro	Thr
Leu 305	Ser	Pro	Arg	Gln	Ser 310	Met	Ile	Ser	Thr	Gln 315	Asn	Gln	Tyr	Ser	Thr 320
Leu	Ser	Lys	Pro	Ala 325	Ala	Leu	Thr	Gly	Thr 330	Leu	Glu	Val	Arg	Leu 335	Met
Gly	Cys	Gln	Asp 340	Ile	Leu	Glu	Asn	Val 345	Pro	Gly	Arg	Ser	Lys 350	Ala	Thr

Ser Val Ala Leu Pro Gly Trp Ser Pro Ser Glu Thr Arg Ser Ser Phe 355 360 365

Met Ser Arg Thr Ser Lys Ser Lys Ser Gly Ser Ser Arg Asn Leu Leu 370 375 380

Lys Thr Asp Asp Leu Ser Asn Asp Val Cys Ala Val Leu Lys Leu Asp 385 390 395 400

Asn Thr Val Val Gly Gln Thr Ser Trp Lys Pro Ile Ser Asn Gln Ser 405 410 415

Trp Asp Gln Lys Phe Thr Leu Glu Leu Asp Arg Ser Arg Glu Leu Glu
420 425 430

Ile Ser Val Tyr Trp Arg Asp Trp Arg Ser Leu Cys Ala Val Lys Phe
435 440 445

Leu Arg Leu Glu Asp Phe Leu Asp Asn Gln Arg His Gly Met Cys Leu 450 455 460

Tyr Leu Glu Pro Gln Gly Thr Leu Phe Ala Glu Val Thr Phe Phe Asn 465 470 475 480

Pro Val Ile Glu Arg Arg Pro Lys Leu Gln Arg Gln Lys Lys Ile Phe 485 490 495

Ser Lys Gln Gln Gly Lys Thr Phe Leu Arg Ala Pro Gln Met Asn Ile 500 505 510

Asn Ile Ala Thr Trp Gly Arg Leu Val Arg Arg Ala Ile Pro Thr Val 515 520 525

Asn His Ser Gly Thr Phe Ser Pro Gln Ala Pro Val Pro Thr Thr Val 530 540

Pro Val Val Asp Val Arg Ile Pro Gln Leu Ala Pro Pro Ala Ser Asp 545 550 555 560

Ser Thr Val Thr Lys Leu Asp Phe Asp Leu Glu Pro Glu Pro Pro Pro 565 570 575

Ala Pro Pro Arg Ala Ser Ser Leu Gly Glu Ile Asp Glu Ser Ser Glu 580 585 590

Leu Arg Val Leu Asp Ile Pro Gly Gln Ala Ser His Phe Lys Pro Cys 595 600 605

Ile Ile Pro Leu His 610

<210> 167

<211> 133

<212> PRT

<213> Homo sapiens

<400> 167

Met Val Ser Ser Gln Lys Leu Glu Lys Pro Ile Glu Met Gly Ser Ser 1 10 15

Glu Pro Leu Pro Ile Ala Asp Gly Asp Arg Arg Lys Lys Lys Arg
20 25 30

Arg Gly Arg Ala Thr Asp Ser Leu Pro Gly Lys Phe Glu Asp Met Tyr 35 40 45

Lys Leu Thr Ser Glu Leu Leu Gly Glu Gly Ala Tyr Ala Lys Val Gln 50 55 60

Gly Ala Val Ser Leu Gln Asn Gly Lys Glu Tyr Ala Val Lys Ile Ile 65 70 75 80

Glu Lys Gln Ala Gly His Ser Arg Ser Arg Val Phe Arg Glu Val Glu 85 90 95

Thr Leu Tyr Gln Cys Gln Gly Asn Lys Asn Ile Leu Glu Leu Ile Glu 100 105 110

Phe Phe Glu Asp Asp Thr Arg Phe Tyr Leu Val Phe Glu Lys Leu Gln 115 120 125

Gly Gly Thr Tyr Arg 130

<210> 168

<211> 153

<212> PRT

<213> Homo sapiens

<400> 168

Met Leu Gln Val Gly Val Leu Arg Asp Arg Ser Pro Ala Gly Ala Ser .

1 10 15

Glu Gly Phe His Val Arg Gly Arg Trp Arg Thr Glu Asp Cys His Leu 20 25 30

Arg Thr Lys Ala Ile Glu Thr Leu Arg Val Ala Gly Arg His Gln Leu 35 40 45

Pro Asp Arg Ser Phe Ile Ser Phe Gly Ile Ser Ser Leu Gln Met Val 50 55 60

Ser Ser Gln Lys Leu Glu Lys Pro Ile Glu Met Gly Ser Ser Glu Pro 75 80

Leu Pro Ile Ala Asp Gly Asp Arg Arg Lys Lys Lys Arg Arg Gly 85 90 95

Arg Ala Thr Asp Ser Leu Pro Gly Lys Phe Glu Asp Met Tyr Lys Leu 100 105 110

Thr Ser Glu Leu Leu Gly Glu Gly Ala Tyr Ala Lys Val Gln Gly Ala

115 120 125

Val Ser Leu Gln Asn Gly Lys Glu Tyr Ala Val Lys Val Ser Val Ser 130 135 140

Ala Glu Cys Gln Ala Leu Leu Cys Lys 145 150

<210> 169

<211> 231

<212> PRT

<213> Homo sapiens

<400> 169

Met Gly Ser Gly Met Lys Leu Asn Asn Ser Cys Thr Pro Ile Thr Thr
1 5 10 15

Pro Glu Leu Thr Thr Pro Cys Gly Ser Ala Glu Tyr Met Ala Pro Glu 20 25 30

Val Val Glu Val Phe Thr Asp Gln Ala Thr Phe Tyr Asp Lys Arg Cys 35 40 45

Asp Leu Trp Ser Leu Gly Val Val Leu Tyr Ile Met Leu Ser Gly Tyr 50 55 60

Pro Pro Phe Val Gly His Cys Gly Ala Asp Cys Gly Trp Asp Arg Gly 65 70 75 80

Glu Val Cys Arg Val Cys Gln Asn Lys Leu Phe Glu Ser Ile Gln Glu 85 90 95

Gly Lys Tyr Glu Phe Pro Asp Lys Asp Trp Ala His Ile Ser Ser Glu 100 105 110

Ala Lys Asp Leu Ile Ser Lys Leu Leu Val Arg Asp Ala Lys Gln Arg 115 120 125

Leu Ser Ala Ala Gln Val Leu Gln His Pro Trp Val Gln Gly Gln Ala 130 135 140

Pro Glu Lys Gly Leu Pro Thr Pro Gln Val Leu Gln Arg Asn Ser Ser 145 150 155 160

Thr Met Asp Leu Thr Leu Phe Ala Ala Glu Ala Ile Ala Leu Asn Arg 165 170 175

Gln Leu Ser Gln His Glu Glu Asn Glu Leu Ala Glu Glu Pro Glu Ala 180 185 190

Leu Ala Asp Gly Leu Cys Ser Met Lys Leu Ser Pro Pro Cys Lys Ser 195 200 205

Arg Leu Ala Arg Arg Arg Ala Leu Ala Gln Ala Gly Arg Gly Glu Asp 210 215 220

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Arg Ser Pro Pro Thr Ala Leu
225
                    230
<210> 170
<211> 146
<212> PRT
<213> Homo sapiens
<400> 170
Met Arg Lys Gly Val Leu Lys Asp Pro Glu Ile Ala Asp Leu Phe Tyr
Lys Asp Asp Pro Glu Glu Leu Phe Ile Gly Leu His Glu Ile Gly His
            20
Gly Ser Phe Gly Ala Val Tyr Phe Ala Thr Asn Ala His Thr Ser Glu
                            40
Val Val Ala Ile Lys Lys Met Ser Tyr Ser Gly Lys Gln Thr His Glu
Lys Trp Gln Asp Ile Leu Lys Glu Val Lys Phe Leu Arg Gln Leu Lys
His Pro Asn Thr Ile Glu Tyr Lys Gly Cys Tyr Leu Lys Glu His Thr
Ala Trp Leu Val Met Glu Tyr Cys Leu Gly Ser Ala Ser Asp Leu Leu
Glu Val His Lys Lys Pro Leu Gln Glu Val Glu Ile Ala Ala Ile Thr
His Gly Ala Leu His Gly Leu Ala Tyr Leu His Ser His Ala Leu Ile
                        135
His Arg
145
<210> 171
<211> 123
<212> PRT
<213> Homo sapiens
<400> 171
Met Met Glu Glu Leu His Ser Leu Asp Pro Arg Arg Gln Glu Leu Leu
                                    10
Glu Ala Arg Phe Thr Gly Val Gly Val Ser Lys Gly Pro Leu Asn Ser
Glu Ser Ser Asn Gln Ser Leu Cys Ser Val Gly Ser Leu Ser Asp Lys
                            40
```

Glu Val Glu Thr Pro Glu Lys Lys Gln Asn Asp Gln Arg Asn Arg Lys

60

Arg Lys Ala Glu Pro Tyr Glu Thr Ser Gln Gly Lys Gly Thr Pro Arg 65 70 75 80

55

Gly His Lys Ile Ser Asp Tyr Phe Glu Thr Ala Pro Leu Trp Phe Arg 85 90 95

Trp Gln Cys Cys Lys Gly Gly Asn Arg Gly Ala Val Cys Ser Ala Asn 100 105 110

Pro His Val Ser Asp Ala Ser Lys Thr Ser Ala 115 120

<210> 172

<211> 478

<212> PRT

<213> Homo sapiens

<400> 172

Met Val Gly Ile Lys Glu Arg Pro Ser Ser Asn Leu Pro Cys Pro Pro 1 5 10 15

Leu Pro Pro Gln Thr Gln Ala Cys Pro Pro Leu Ser Trp Pro Gln Arg 20 25 30

Leu Asp Ile Leu Leu Gly Thr Ala Arg Ala Ile Gln Phe Leu His Gln 35 40 45

Asp Ser Pro Ser Leu Ile His Gly Asp Ile Lys Ser Ser Asn Val Leu 50 55 60

Leu Asp Glu Arg Leu Thr Pro Lys Leu Gly Asp Phe Gly Leu Ala Arg 65 70 75 80

Phe Ser Arg Phe Ala Gly Ser Ser Pro Ser Gln Ser Ser Met Val Ala 85 90 95

Arg Thr Gln Thr Val Arg Gly Thr Leu Ala Tyr Leu Pro Glu Glu Tyr
100 105 110

Ile Lys Thr Gly Arg Leu Ala Val Asp Thr Asp Thr Phe Ser Phe Gly 115 120 125

Val Val Leu Glu Thr Leu Ala Gly Gln Arg Ala Val Lys Thr His 130 135 140

Glu Ala Gly Val Ala Leu Arg Ser Thr Gln Ser Thr Leu Gln Ala Gly
165 170 175

Leu Ala Ala Asp Ala Trp Ala Ala Pro Ile Ala Met Gln Ile Tyr Lys 180 185 190 Lys His Leu Asp Pro Arg Pro Gly Pro Cys His Leu Ser Trp Ala Trp
195 200 205

Ala Trp Ala Ser Trp Pro Ala Ala Ala Cys Thr Ala Gly Pro Lys Gly
210 215 220

Arg Pro Pro Met Thr Gln Val Tyr Glu Arg Leu Glu Lys Leu Gln Ala 225 230 235 240

Val Val Ala Gly Val Pro Gly His Leu Glu Ala Ala Ser Cys Ile Pro 245 250 255

Phe Pro Gln Glu Asn Ser Tyr Val Ser Ser Thr Gly Arg Ala His Ser 260 265 270

Gly Ala Ala Pro Trp Gln Pro Leu Ala Ala Pro Ser Gly Ala Ser Ala 275 280 285

Gln Ala Ala Glu Gln Leu Gln Arg Gly Pro Asn Gln Pro Val Glu Ser 290 295 300

Asp Glu Ser Leu Gly Gly Leu Ser Ala Ala Leu Arg Ser Trp His Leu 305 310 315 320

Thr Pro Ser Cys Pro Leu Asp Pro Ala Pro Leu Arg Glu Ala Gly Cys 325 330 335

Pro Gln Gly Asp Thr Ala Gly Glu Ser Ser Trp Gly Ser Gly Pro Gly 340 345 350

Ser Arg Pro Thr Ala Val Glu Gly Leu Ala Leu Gly Ser Ser Ala Ser 355 360 365

Ser Ser Ser Glu Pro Pro Gln Ile Ile Ile Asn Pro Ala Arg Gln Lys 370 375 380

Met Val Gln Lys Leu Ala Leu Tyr Glu Asp Gly Ala Leu Asp Ser Leu 385 390 395 400

Gln Leu Leu Ser Ser Ser Ser Leu Pro Gly Leu Gly Leu Glu Gln Asp 405 410 415

Arg Gln Gly Pro Lys Lys Val Met Asn Phe Arg Ala Asp Val Phe Thr 420 425 430

Trp Ala Asp Pro Pro Asn Pro Glu Val Lys Val Leu Met Val Arg Ser
435 440 445

Ser His Gly Ala Arg Val Leu Ser Thr Leu Pro Ala Val Gly Val Gly
450 455 460

Ala His Ala Arg Trp Gly Glu Lys Glu Val Ala Leu Leu Phe 465 470 475

<210> 173

<211> 344

<212> PRT

<213> Homo sapiens

<400> 173

Met Ala Gly Gly Pro Gly Pro Gly Glu Pro Ala Ala Pro Gly Ala Gln 1 5 10 15

His Phe Leu Tyr Glu Val Pro Pro Trp Val Met Cys Arg Phe Tyr Lys 20 25 30

Val Met Asp Ala Leu Glu Pro Ala Asp Trp Cys Gln Phe Ala Ala Leu 35 40 45

Ile Val Arg Asp Gln Thr Glu Leu Arg Leu Cys Glu Arg Ser Gly Gln 50 55 60

Arg Thr Ala Ser Val Leu Trp Pro Trp Ile Asn Arg Asn Ala Arg Val 65 70 75 80

Ala Asp Leu Val His Ile Leu Thr His Leu Gln Leu Leu Arg Ala Arg 85 90 95

Asp Ile Ile Thr Ala Trp His Pro Pro Ala Pro Leu Pro Ser Pro Gly
100 105 110

Thr Thr Ala Pro Arg Pro Ser Ser Ile Pro Ala Pro Ala Glu Ala Glu
115 120 125

Ala Trp Ser Pro Arg Lys Leu Pro Ser Ser Ala Ser Thr Phe Leu Ser 130 135 140

Pro Ala Phe Pro Gly Ser Gln Thr His Ser Gly Pro Glu Leu Gly Leu 145 150 155 160

Val Pro Ser Pro Ala Ser Leu Trp Pro Pro Pro Pro Ser Pro Ala Pro 165 170 175

Ser Ser Thr Lys Pro Gly Pro Glu Ser Ser Val Ser Leu Leu Gln Gly 180 185 190

Ala Arg Pro Ser Pro Phe Cys Trp Pro Leu Cys Glu Ile Ser Arg Gly
195 200 205

Thr His Asn Phe Ser Glu Glu Leu Lys Ile Gly Glu Gly Phe Gly 210 215 220

Cys Val Tyr Arg Ala Val Met Arg Asn Thr Val Tyr Ala Val Lys Arg 225 230 235 240

Leu Lys Glu Asn Ala Asp Leu Glu Trp Thr Ala Val Lys Gln Ser Phe 245 250 255

Leu Thr Glu Val Glu Gln Leu Ser Arg Phe Arg His Pro Asn Ile Val 260 265 270

Asp Phe Ala Gly Tyr Cys Ala Gln Asn Gly Phe Tyr Cys Leu Val Tyr 275 280 285

Gly Phe Leu Pro Asn Gly Ser Leu Glu Asp Arg Leu His Cys Gln Thr 290 295 300

Gln Ala Cys Pro Pro Leu Ser Trp Pro Gln Arg Leu Asp Ile Leu Leu 305 310 315 320

Gly Thr Ala Arg Ala Ser Gln Val Ser Cys Asn Arg Val Ser Ser Cys 325 330 335

Val Ser Lys Ser Ser Pro Gly Leu 340

<210> 174

<211> 336

<212> PRT

<213> Homo sapiens

<400> 174

Met Phe Thr Glu Glu Asp Val Lys Phe Tyr Leu Ala Glu Leu Ala Leu 1 5 10 15

Ala Leu Asp His Leu His Ser Leu Gly Ile Ile Tyr Arg Asp Leu Lys
20 25 30

Pro Glu Asn Ile Leu Leu Asp Glu Glu Gly His Ile Lys Leu Thr Asp 35 40 45

Phe Gly Leu Ser Lys Glu Ser Ile Asp His Glu Lys Lys Ala Tyr Ser 50 55 60

Phe Cys Gly Thr Val Glu Tyr Met Ala Pro Glu Val Val Asn Arg Arg 65 70 75 80

Gly His Thr Gln Ser Ala Asp Trp Trp Ser Phe Gly Val Leu Met Phe 85 90 95

Glu Met Leu Thr Gly Thr Leu Pro Phe Gln Gly Lys Asp Arg Lys Glu 100 105 110

Thr Met Thr Met Ile Leu Lys Ala Lys Leu Gly Met Pro Gln Phe Leu 115 120 125

Ser Pro Glu Ala Gln Ser Leu Leu Arg Met Leu Phe Lys Arg Asn Pro 130 135 140

Ala Asn Arg Leu Gly Ala Gly Pro Asp Gly Val Glu Glu Ile Lys Arg 145 150 155 160

His Ser Phe Phe Ser Thr Ile Asp Trp Asn Lys Leu Tyr Arg Arg Glu 165 170 175

Ile His Pro Pro Phe Lys Pro Ala Thr Gly Arg Pro Glu Asp Thr Phe 180 185 190

Tyr Phe Asp Pro Glu Phe Thr Ala Lys Thr Pro Lys Asp Ser Pro Gly

195 200 205

Ile Pro Pro Ser Ala Asn Ala His Gln Leu Phe Arg Gly Phe Ser Phe 215 220 Val Ala Ile Thr Ser Asp Asp Glu Ser Gln Ala Met Gln Thr Val Gly 235 230 Val His Ser Ile Val Gln Gln Leu His Arg Asn Ser Ile Gln Phe Thr 250 Asp Gly Tyr Glu Val Lys Glu Asp Ile Gly Val Gly Ser Tyr Ser Val Cys Lys Arg Cys Ile His Lys Ala Thr Asn Met Glu Phe Ala Val Lys Val Asn Phe Phe Tyr Leu Lys Cys Asn Ser Tyr Ser Ser Cys Ser Cys Met Ser Val Pro Val Lys Asn Tyr Thr Pro Leu Val Val Lys Ser Ala 305 Phe Cys Tyr Lys Lys Val Lys Tyr Leu Ala Ser Asp Leu Gln Arg Ser 330 <210> 175 <211> 198 <212> PRT <213> Homo sapiens <400> 175 Met Pro Leu Ala Gln Leu Ala Asp Pro Trp Gln Lys Met Ala Val Glu Ser Pro Ser Asp Ser Ala Glu Asn Gly Gln Gln Ile Met Asp Glu Pro 25 Met Gly Glu Glu Glu Ile Asn Pro Gln Thr Glu Glu Val Ser Ile Lys 35 40 Glu Ile Ala Ile Thr His His Val Lys Glu Gly His Glu Lys Ala Asp Pro Ser Gln Phe Glu Leu Lys Val Leu Gly Gln Gly Ser Phe Gly Lys Val Phe Leu Val Lys Lys Ile Ser Gly Ser Asp Ala Arg Gln Leu Tyr Ala Met Lys Val Leu Lys Lys Ala Thr Leu Lys Val Arg Asp Arg 100 105

Val Arg Thr Lys Met Glu Arg Asp Ile Leu Val Glu Val Asn His Pro 115 120 125 Phe Ile Val Lys Leu His Tyr Ala Phe Gln Thr Glu Gly Lys Leu Tyr 130 135 140

Leu Ile Leu Asp Phe Leu Arg Gly Gly Asp Leu Phe Thr Arg Leu Ser 145 150 155 160

Lys Glu Val Met Phe Thr Glu Glu Asp Val Lys Phe Tyr Leu Ala Glu 165 170 175

Leu Ala Leu Ala Leu Asp His Leu His Ser Leu Gly Ile Ile Tyr Arg 180 185 190

Asp Leu Lys Pro Glu Lys 195

<210> 176

<211> 489

<212> PRT

<213> Homo sapiens

<400> 176

Met Ser Thr Glu Ala Asp Glu Gly Ile Thr Phe Ser Val Pro Pro Phe 1 5 10 15

Ala Pro Ser Gly Phe Cys Thr Ile Pro Glu Gly Gly Ile Cys Arg Arg 20 25 30

Gly Gly Ala Ala Ala Val Gly Glu Glu Glu His Gln Leu Pro Pro 35 40 45

Pro Pro Pro Gly Ser Phe Trp Asn Val Glu Ser Ala Ala Pro Gly 50 55 60

Ile Gly Cys Pro Ala Ala Thr Ser Ser Ser Ser Ala Thr Arg Gly Arg
65 70 75 80

Gly Ser Ser Val Gly Gly Ser Arg Arg Thr Thr Val Ala Tyr Val 85 90 95

Ile Asn Glu Ala Ser Gln Gly Gln Leu Val Val Ala Glu Ser Glu Ala 100 105 110

Leu Gln Ser Leu Arg Glu Ala Cys Glu Thr Val Gly Ala Thr Leu Glu 115 120 125

Thr Leu His Phe Gly Lys Leu Asp Phe Gly Glu Thr Thr Val Leu Asp 130 135 140

Arg Phe Tyr Asn Ala Asp Ile Ala Val Val Glu Met Ser Asp Ala Phe 145 150 155 160

Arg Gln Pro Ser Leu Phe Tyr His Leu Gly Val Arg Glu Ser Phe Ser 165 170 175

Met Ala Asn Asn Ile Ile Leu Tyr Cys Asp Thr Asn Ser Asp Ser Leu 180 185 190

Gln Se	er Lei	ı Lys	Glu	Ile	Ile	Cys	Gln	Lys	Asn	Thr	Met	Cys	Thr	Gly
	195	5				200					205			

- Asn Tyr Thr Phe Val Pro Tyr Met Ile Thr Pro His Asn Lys Val Tyr 210 215 220
- Cys Cys Asp Ser Ser Phe Met Lys Gly Leu Thr Glu Leu Met Gln Pro 225 230 235 240
- Asn Phe Glu Leu Leu Gly Pro Ile Cys Leu Pro Leu Val Asp Arg 245 250 255
- Phe Ile Gln Leu Leu Lys Val Ala Gln Ala Ser Ser Ser Gln Tyr Phe 260 265 270
- Arg Glu Ser Ile Leu Asn Asp Ile Arg Lys Ala Arg Asn Leu Tyr Thr 275 280 285
- Gly Lys Glu Leu Ala Ala Glu Leu Ala Arg Ile Arg Gln Arg Val Asp 290 295 300
- Asn Ile Glu Val Leu Thr Ala Asp Ile Val Ile Asn Leu Leu Ser 305 310 315 320
- Tyr Arg Asp Ile Gln Asp Tyr Asp Ser Ile Val Lys Leu Val Glu Thr 325 330 335
- Leu Glu Lys Leu Pro Thr Phe Asp Leu Ala Ser His His Val Lys 340 345 350
- Phe His Tyr Ala Phe Ala Leu Asn Arg Arg Asn Leu Pro Gly Asp Arg
- Ala Lys Ala Leu Asp Ile Met Ile Pro Met Val Gln Ser Glu Gly Gln 370 380
- Val Ala Ser Asp Met Tyr Cys Leu Val Gly Arg Ile Tyr Lys Asp Met 385 390 395 400
- Phe Leu Asp Ser Asn Phe Thr Asp Thr Glu Ser Arg Asp His Gly Ala
 405 410 415
- Ser Trp Phe Lys Lys Ala Phe Glu Ser Glu Pro Thr Leu Gln Ser Gly 420 425 430
- Ile Asn Tyr Ala Val Leu Leu Leu Ala Ala Gly His Gln Phe Glu Ser 435 440 445
- Ser Phe Glu Leu Arg Lys Val Gly Asn Tyr Asn Leu Asn Phe Tyr Met 450 455 460
- Glu Ile Lys Lys Leu Gly Pro Asn Leu Val Gln Arg Arg Ile Ser Ala 465 470 475 480

Asp Ser Asp Gly Ser Pro Gly Phe Val

485

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<210> 177
<211>
      105
<212> PRT
<213> Homo sapiens
<400> 177
Met Arg Glu Phe Glu Val Leu Lys Lys Leu Asn His Lys Asn Ile Val
Lys Leu Phe Ala Ile Glu Glu Glu Thr Thr Arg His Lys Val Leu
            20
Ile Met Glu Phe Cys Pro Cys Gly Ser Leu Tyr Thr Val Leu Glu Glu
Pro Ser Asn Ala Tyr Gly Leu Pro Glu Ser Glu Phe Leu Ile Val Leu
Arg Asp Val Val Gly Gly Met Asn His Leu Arg Glu Asn Gly Ile Val
His Arg Asp Ile Lys Pro Gly Asn Ile Met Arg Ala Leu Tyr His Ser
                                    90
Leu Val Asp Asp Ser Phe His Pro Pro
            100
<210> 178
<211> 413
<212> PRT
<213> Homo sapiens
<220>
<221>
<222> (1)..(413)
<223> "XAA" can be any amino acid
<400> 178
Met Tyr Cys Phe Gly Arg Lys Xaa Tyr Ile Ser Thr Arg Pro Cys Phe
Pro Asn Lys Thr Cys Gln Lys Met Leu Ile Ile Leu Thr Ser Ala Leu
Gln Ile Ala His Arg Cys Ile Cys Arg Ile Leu Leu Gly Ser Arg Val
        35
Leu Ala Ala Lys Ala Ser Gly Asn Cys Thr Leu Asn Ser Glu Asp Phe
Ile Phe Asn Ile Gly Ser Ala Ala Tyr Asp Ala Val Leu Asp Arg Asn
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- Val Ala Ile Lys Lys Leu Ser Arg Pro Phe Gln Asn Gln Thr His Ala 85 90 95
- Lys Arg Ala Tyr Arg Glu Leu Val Leu Met Lys Cys Val Asn His Lys
 100 105 110
- Asn Ile Ile Ser Leu Leu Asn Val Phe Thr Pro Gln Lys Thr Leu Glu 115 120 125
- Glu Phe Gln Asp Val Tyr Leu Val Met Glu Leu Met Asp Ala Asn Leu 130 135 140
- Cys Gln Val Ile Gln Met Glu Leu Asp His Glu Arg Met Ser Tyr Leu 145 150 155 160
- Leu Tyr Gln Met Leu Cys Gly Ile Lys His Leu His Ser Ala Gly Ile 165 170 175
- Ile His Arg Asp Leu Lys Pro Ser Asn Ile Val Val Lys Ser Asp Cys
 180 185 190
- Thr Leu Lys Ile Leu Asp Phe Gly Leu Ala Arg Thr Ala Gly Thr Ser 195 200 205
- Phe Met Met Thr Pro Tyr Val Val Thr Arg Tyr Tyr Arg Ala Pro Glu 210 215 220
- Val Ile Leu Gly Met Gly Tyr Lys Glu Asn Val Asp Ile Trp Ser Val 225 230 235 240
- Gly Cys Ile Met Gly Glu Met Val Arg His Lys Ile Leu Phe Pro Gly
 245 250 255
- Arg Asp Tyr Ile Asp Gln Trp Asn Lys Val Ile Glu Gln Leu Gly Thr 260 265 270
- Pro Cys Pro Glu Phe Met Lys Lys Leu Gln Pro Thr Val Arg Asn Tyr 275 280 285
- Val Glu Asn Arg Pro Lys Tyr Ala Gly Leu Thr Phe Pro Lys Leu Phe 290 295 300
- Pro Asp Ser Leu Phe Pro Ala Asp Ser Glu His Asn Lys Leu Lys Ala 305 310 315 320
- Ser Gln Ala Arg Asp Leu Leu Ser Lys Met Leu Val Ile Asp Pro Ala 325 330 335
- Lys Arg Ile Ser Val Asp Asp Ala Leu Gln His Pro Tyr Ile Asn Val 340 345 350
- Trp Tyr Asp Pro Ala Glu Val Glu Ala Pro Pro Pro Gln Ile Tyr Asp 355 360 365
- Lys Gln Leu Asp Glu Arg Glu His Thr Ile Glu Glu Trp Lys Glu Leu 370 375 380

Ile Tyr Lys Glu Val Met Asn Ser Glu Glu Lys Thr Lys Asn Gly Val
385 390 395 400

Val Lys Gly Gln Pro Ser Pro Ser Ala Gln Val Gln Gln 405 410

<210> 179

<211> 108

<212> PRT

<213> Homo sapiens

<400> 179

Met Ser Lys Ser Lys Val Asp Asn Gln Phe Tyr Ser Val Glu Val Gly
1 5 10 15

Asp Ser Thr Phe Thr Val Leu Lys Arg Tyr Gln Asn Leu Lys Pro Ile 20 25 30

Gly Ser Gly Ala Gln Gly Ile Val Cys Ala Ala Tyr Asp Ala Val Leu 35 40 45

Asp Arg Asn Val Ala Ile Lys Lys Leu Ser Arg Pro Phe Gln Asn Gln 50 55 60

Thr His Ala Lys Arg Ala Tyr Arg Glu Leu Val Leu Met Lys Cys Val 65 70 75 80

Asn His Lys Asn Val Ser Phe Val Ile Phe Lys Leu Leu Ala Val Gly 85 90 95

Val Cys Lys Ile Gly Lys Arg Lys Cys Val Cys Thr 100 105

<210> 180

<211> 336

<212> PRT

<213> Homo sapiens

<400> 180

Met Ala Met Thr Gly Ser Thr Pro Cys Ser Ser Met Ser Asn His Thr 1 5 10 15

Lys Glu Arg Val Thr Met Thr Lys Val Thr Leu Glu Asn Phe Tyr Ser 20 25 30

Asn Leu Ile Ala Gln His Glu Glu Arg Glu Met Arg Gln Lys Lys Leu 35 40 45

Glu Lys Val Met Glu Glu Glu Gly Leu Lys Asp Glu Glu Lys Arg Leu 50 55 60

Arg Arg Ser Ala His Ala Arg Lys Glu Thr Glu Phe Leu Arg Leu Lys 65 70 75 80

Arg Thr Arg Leu Gly Leu Glu Asp Phe Glu Ser Leu Lys Val Ile Gly

Arg Gly Ala Phe Gly Glu Val Arg Leu Val Gln Lys Lys Asp Thr Gly 100 105 110

His Val Tyr Ala Met Lys Ile Leu Arg Lys Ala Asp Met Leu Glu Lys
115 120 125

Glu Gln Val Gly His Ile Arg Ala Glu Arg Asp Ile Leu Val Glu Ala 130 135 140

Asp Ser Leu Trp Val Val Lys Met Phe Tyr Ser Phe Gln Asp Lys Leu 145 150 155 160

Asn Leu Tyr Leu Ile Met Glu Phe Leu Pro Gly Gly Asp Met Met Thr 165 170 175

Leu Leu Met Lys Lys Asp Thr Leu Thr Glu Glu Glu Thr Gln Phe Tyr 180 185 190

Ile Ala Glu Thr Val Leu Ala Ile Asp Ser Ile His Gln Leu Gly Phe
195 200 205

Ile His Arg Asp Ile Lys Pro Asp Asn Leu Leu Asp Ser Lys Gly 210 215 220

His Val Lys Leu Ser Asp Phe Gly Leu Cys Thr Gly Leu Lys Lys Ala 225 230 235 240

His Arg Thr Glu Phe Tyr Arg Asn Leu Asn His Ser Leu Pro Ser Asp 245 250 255

Phe Thr Phe Gln Asn Met Asn Ser Lys Arg Lys Ala Glu Thr Trp Lys 260 265 270

Arg Asn Arg Arg Gln Leu Ala Phe Ser Thr Val Gly Thr Pro Asp Tyr 275 280 285

Ile Ala Pro Glu Val Phe Met Gln Thr Gly Tyr Asn Lys Leu Cys Asp 290 295 300

Trp Trp Ser Leu Gly Val Ile Met Tyr Glu Met Leu Ile Gly Lys Leu 305 310 315 320

His Gly Phe Arg Gly Leu Phe Leu Cys Ile His Asp Arg Leu Leu His 325 330 335

<210> 181

<211> 415

<212> PRT

<213> Homo sapiens

<220>

<221>

<222> (1)..(415)

<223> "XAA " can be any amino acid

- Xaa Arg His Glu Ser Ala Arg Ala Ala Arg Val Ser Gly Gly Ser Met 1 5 10 15
- Leu Asp Ile Ile Lys Tyr Ile Val Asn Arg Gly Glu His Lys Asn Gly
 20 25 30
- Val Leu Glu Glu Ala Ile Ile Ala Thr Ile Leu Lys Glu Val Leu Glu 35 40 45
- Gly Leu Asp Tyr Leu His Arg Asn Gly Gln Ile His Arg Asp Leu Lys
 50 55 60
- Ala Gly Asn Ile Leu Leu Gly Glu Asp Gly Ser Val Gln Ile Ala Asp 65 70 75 80
- Phe Gly Val Ser Ala Phe Leu Ala Thr Gly Gly Asp Val Thr Arg Asn 85 90 95
- Lys Val Arg Lys Thr Phe Val Gly Thr Pro Cys Trp Met Ala Pro Glu 100 105 110
- Val Met Glu Gln Val Arg Gly Tyr Asp Phe Lys Ala Asp Met Trp Ser 115 120 125
- Phe Gly Ile Thr Ala Ile Glu Leu Ala Thr Gly Ala Ala Pro Tyr His 130 135 140
- Lys Tyr Pro Pro Met Lys Val Leu Met Leu Thr Leu Gln Asn Asp Pro 145 150 155 160
- Pro Thr Leu Glu Thr Gly Val Glu Asp Lys Glu Met Met Lys Lys Tyr 165 170 175
- Gly Lys Ser Phe Arg Lys Leu Leu Ser Leu Cys Leu Gln Lys Asp Pro 180 185 190
- Ser Lys Arg Pro Thr Ala Ala Glu Leu Leu Lys Cys Lys Phe Phe Gln 195 200 205
- Lys Ala Lys Asn Arg Glu Tyr Leu Ile Glu Lys Leu Leu Thr Arg Thr 210 215 220
- Pro Asp Ile Ala Gln Arg Ala Lys Lys Val Arg Arg Val Pro Gly Ser 225 230 235 240
- Ser Gly His Leu His Lys Thr Glu Asp Gly Asp Trp Glu Trp Ser Asp 245 250 255
- Asp Glu Met Asp Glu Lys Ser Glu Glu Gly Lys Ala Ala Phe Ser Gln 260 265 270
- Glu Lys Ser Arg Arg Val Lys Glu Glu Asn Pro Glu Ile Ala Val Ser 275 280 285

Ala Ser Thr Ile Pro Glu Gln Ile Gln Ser Leu Ser Val His Asp Ser 290 295 Gln Gly Pro Pro Asn Ala Asn Glu Asp Tyr Arg Glu Ala Ser Ser Cys 310 Ala Val Asn Leu Val Leu Arg Leu Arg Asn Ser Arg Lys Glu Leu Asn Asp Ile Arg Phe Glu Phe Thr Pro Gly Arg Asp Thr Ala Asp Gly Val Ser Gln Glu Leu Phe Ser Ala Gly Leu Val Asp Gly His Asp Val Val 360 Ile Val Ala Ala Asn Leu Gln Lys Ile Val Asp Asp Pro Lys Ala Leu Lys Thr Leu Thr Phe Lys Leu Ala Ser Gly Cys Asp Gly Ser Glu Ile 390 Pro Asp Glu Val Lys Leu Ile Gly Phe Ala Gln Leu Ser Val Ser 405 410 <210> 182 <211> 409 <212> PRT <213> Homo sapiens <220> <221> <222> (1)..(409) <223> "Xaa" can be any amino acid <400> 182 Xaa Arg His Glu Ser Ala Arg Ala Ala Arg Val Ser Gly Gly Ser Met Leu Asp Ile Ile Lys Tyr Ile Val Asn Arg Gly Glu His Lys Asn Gly Val Leu Glu Glu Ala Ile Ile Ala Thr Ile Leu Lys Glu Val Leu Glu Gly Leu Asp Tyr Leu His Arg Asn Gly Gln Ile His Arg Asp Leu Lys 50 Ala Gly Asn Ile Leu Leu Gly Glu Asp Gly Ser Val Gln Ile Ala Asp Phe Gly Val Ser Ala Phe Leu Ala Thr Gly Gly Asp Val Thr Arg Asn Lys Val Arg Lys Thr Phe Val Gly Thr Pro Cys Trp Met Ala Pro Glu

105

100

Val	Met	Glu	Gln	Val	Arg	GTA	Tyr	Asp	Phe	Lys	Ala	Asp	Met	Trp	Ser
		115					120					125			

- Phe Gly Ile Thr Ala Ile Glu Leu Ala Thr Gly Ala Ala Pro Tyr His 130 135 140
- Lys Tyr Pro Pro Met Lys Val Leu Met Leu Thr Leu Gln Asn Asp Pro 145 150 155 160
- Pro Thr Leu Glu Thr Gly Val Glu Asp Lys Glu Met Met Lys Lys Tyr 165 170 175
- Gly Lys Ser Phe Arg Lys Leu Leu Ser Leu Cys Leu Gln Lys Asp Pro 180 185 190
- Ser Lys Arg Pro Thr Ala Ala Glu Leu Leu Lys Cys Lys Phe Phe Gln 195 200 205
- Lys Ala Lys Asn Arg Glu Tyr Leu Ile Glu Lys Leu Leu Thr Arg Thr 210 215 220
- Pro Asp Ile Ala Gln Arg Ala Lys Lys Val Arg Arg Val Pro Gly Ser 225 230 235 240
- Ser Gly His Leu His Lys Thr Glu Asp Gly Asp Trp Glu Trp Ser Asp 245 250 255
- Asp Glu Met Asp Glu Lys Ser Glu Glu Gly Lys Ala Ala Phe Ser Gln 260 265 270
- Glu Lys Ser Arg Arg Val Lys Glu Glu Asn Pro Glu Ile Ala Val Ser 275 280 285
- Ala Ser Thr Ile Pro Glu Gln Ile Gln Ser Leu Ser Val His Asp Ser 290 295 300
- Gln Gly Pro Pro Asn Ala Asn Glu Asp Tyr Arg Glu Ala Ser Ser Cys 305 310 315 320
- Ala Val Asn Leu Val Leu Arg Leu Arg Asn Ser Arg Lys Glu Leu Asn 325 330 335
- Asp Ile Arg Phe Glu Phe Thr Pro Gly Arg Asp Thr Ala Asp Gly Val 340 345 350
- Ser Gln Glu Leu Phe Ser Ala Gly Leu Val Asp Gly His Asp Val Val 355 360 365
- Ile Val Ala Ala Asn Leu Gln Lys Ile Val Asp Asp Pro Lys Ala Leu 370 375 380
- Lys Thr Leu Thr Phe Lys Leu Asn Gln Phe Leu His Leu Glu Ala Phe 385 390 395 400

Asp Ser Ala Ala Leu Gly Asn Val Phe

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<210> 183
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<211> 977

<212> PRT

<213> Homo sapiens

<400> 183

Met Pro Ala Arg Arg Leu Leu Leu Leu Thr Leu Leu Leu Pro Gly
1 5 10 15

Leu Gly Ile Phe Gly Ser Thr Ser Thr Val Thr Leu Pro Glu Thr Leu
20 25 30

Leu Phe Val Ser Thr Leu Asp Gly Ser Leu His Ala Val Ser Lys Arg
35 40 45

Thr Gly Ser Ile Lys Trp Thr Leu Lys Glu Asp Pro Val Leu Gln Val
50 60

Pro Thr His Val Glu Glu Pro Ala Phe Leu Pro Asp Pro Asn Asp Gly 70 75 80

Ser Leu Tyr Thr Leu Gly Ser Lys Asn Asn Glu Gly Leu Thr Lys Leu 85 90 95

Pro Phe Thr Ile Pro Glu Leu Val Gln Ala Ser Pro Cys Arg Ser Ser 100 105 110

Asp Gly Ile Leu Tyr Met Gly Lys Lys Gln Asp Ile Trp Tyr Val Ile 115 120 125

Asp Leu Leu Thr Gly Glu Lys Gln Gln Thr Leu Ser Ser Ala Phe Ala 130 135 140

Asp Ser Leu Cys Pro Ser Thr Ser Leu Leu Tyr Leu Gly Arg Thr Glu 145 150 155 160

Tyr Thr Ile Thr Met Tyr Asp Thr Lys Thr Arg Glu Leu Arg Trp Asn 165 170 175

Ala Thr Tyr Phe Asp Tyr Ala Ala Ser Leu Pro Glu Asp Glu Gly Asp 180 185 190

Tyr Lys Met Ser His Phe Val Ser Asn Gly Asp Gly Leu Val Val Thr 195 200 205

Val Asp Ser Glu Ser Gly Asp Val Leu Trp Ile Gln Asn Tyr Ala Ser 210 215 220

Pro Val Val Ala Phe Tyr Val Trp Gln Arg Glu Gly Leu Arg Lys Val 225 230 235 240

Met His Ile Asn Val Ala Val Glu Thr Leu Arg Tyr Leu Thr Phe Met 245 250 255

Ser Gly Glu Val Gly Arg Ile Thr Lys Trp Lys Tyr Pro Phe Pro Lys

Glu	Thr	Glu 275	Ala	Lys	Ser	_	Leu 280	Thr	Pro	Thr	Leu	Tyr 285	Val	Gly	Lys
Tyr	Ser 290	Thr	Ser	Leu	Tyr	Ala 295	Ser	Pro	Ser	Met	Val 300	His	Glu	Gly	Val
Ala 305	Val	Val	Pro	Arg	Gly 310	Ser	Thr	Leu	Pro	Leu 315	Leu	Glu	Gly	Pro	Gln 320
Thr	Asp	Gly	Val	Thr 325	Ile	Gly	Asp	Lys	Gly 330	Glu	Cys	Val	Ile	Thr 335	Pro
Ser	Thr	Asp	Val 340	Lys	Phe	Asp	Pro	Gly 345	Leu	Lys	Ser	Lys	Asn 350	Lys	Leu
Asn	Tyr	Leu 355	Arg	Asn	Tyr	Trp	Leu 360	Leu	Ile	Gly	His	His 365	Glu	Thr	Pro
Leu	Ser 370	Ala	Ser	Thr	Lys	Met 375	Leu	Glu	Arg	Phe	Pro 380	Asn	Asn	Leu	Pro
Lys 385	His	Arg	Glu	Asn	Val 390	Ile	Pro	Ala	Asp	Ser 395	Glu	Lys	Lys	Ser	Phe 400
Glu	Glu	Val	Ile	Asn 405	Leu	Val	Asp	Gln	Thr 410	Ser	Glu	Asn	Ala	Pro 415	Thr
Thr	Val	Ser	Arg 420	Asp	Val	Glu	Glu	Lys 425	Pro	Ala	His	Ala	Pro 430	Ala	Arg
Pro	Glu	Ala 435	Pro	Val	Asp	Ser	Met 440	Leu	Lys	Asp	Met	Ala 445	Thr	Ile	Ile
Leu	Ser 450	Thr	Phe	Leu	Leu	Ile 455	Gly	Trp	Val	Ala	Phe 460	Ile	Ile	Thr	Tyr
Pro 465	Leu	Ser	Met	His	Gln 470	Gln	Gln	Gln	Leu	Gln 475	His	Gln	Gln	Phe	Gln 480
Lys	Glu	Leu	Glu	Lys 485	Ile	Gln	Leu	Leu	Gln 490	Gln	Gln	Gln	Gln	Gln 495	Leu
Pro	Phe	His	Pro 500	Pro	Gly	Asp	Thr	Ala 505	Gln	Asp	Gly	Glu	Leu 510	Leu	Asp
Thr	Ser	Gly 515	Pro	Tyr	Ser	Glu	Ser 520	Ser	Gly	Thr	Ser	Ser 525	Pro	Ser	Thr
Ser	Pro 530	Arg	Ala	Ser	Asn	His 535	Ser	Leu	Cys	Ser	Gly 540	Ser	Ser	Ala	Ser
Lys 545	Ala	Gly	Ser	Ser	Pro 550	Ser	Leu	Glu	Gln	Asp 555	Asp	Gly	Asp	Glu	Glu 560
Thr	Ser	Val	Val	Ile	Val	Gly	Lys	Ile	Ser	Phe	Cys	Pro	Lys	Asp	Val

Leu Gly His Gly Ala Glu Gly Thr Ile Val Tyr Arg Gly Met Phe Asp 585 Asn Arg Asp Val Ala Val Lys Arg Ile Leu Pro Glu Cys Phe Ser Phe 600 Ala Asp Arg Glu Val Gln Leu Leu Arg Glu Ser Asp Glu His Pro Asn 615 620 Val Ile Arg Tyr Phe Cys Thr Glu Lys Asp Arg Gln Phe Gln Tyr Ile 625 635 640 630 Ala Ile Glu Leu Cys Ala Ala Thr Leu Gln Glu Tyr Val Glu Gln Lys Asp Phe Ala His Leu Gly Leu Glu Pro Ile Thr Leu Leu Gln Gln Thr 665 Thr Ser Gly Leu Ala His Leu His Ser Leu Asn Ile Val His Arg Asp Leu Lys Pro His Asn Ile Leu Ile Ser Met Pro Asn Ala His Gly Lys Ile Lys Ala Met Ile Ser Asp Phe Gly Leu Cys Lys Leu Ala Val 710 715 720 Gly Arg His Ser Phe Ser Arg Arg Ser Gly Val Pro Gly Thr Glu Gly 730 Trp Ile Ala Pro Glu Met Leu Ser Glu Asp Cys Lys Glu Asn Pro Thr 745 Tyr Thr Val Asp Ile Phe Ser Ala Gly Cys Val Phe Tyr Tyr Val Val 755 Ser Glu Gly Ser His Pro Phe Gly Lys Ser Leu Gln Arg Gln Ala Asn Ile Leu Leu Gly Ala Cys Ser Leu Asp Cys Leu His Pro Glu Lys His 795 Glu Asp Val Ile Ala Arg Glu Leu Ile Glu Lys Met Ile Ala Met Asp Pro Gln Lys Arg Pro Ser Ala Asn Asp Val Leu Lys His Pro Phe Phe Trp Ser Leu Glu Lys Gln Leu Gln Phe Phe Gln Asp Val Ser Asp Arg Ile Glu Lys Glu Ser Leu Asp Gly Pro Ile Val Lys Gln Leu Glu Arg 850 860

Gly Gly Arg Ala Val Val Lys Met Asp Trp Arg Glu Asn Ile Thr Asp

865	870	875	880
865	0,0	0,0	

Pro Leu Gln Thr Asp Leu Arg Lys Phe Arg Thr Tyr Lys Gly Gly Ser 885 890 895

Val Arg Asp Leu Leu Arg Ala Met Arg Asn Lys Lys His His Tyr Arg 900 905 910

Glu Leu Pro Ala Glu Val Arg Glu Thr Leu Gly Thr Leu Pro Asp Asp 915 920 925

Phe Val Cys Tyr Phe Thr Ser Arg Phe Pro His Leu Leu Ala His Thr 930 935 940

Tyr Arg Ala Met Glu Leu Cys Ser His Glu Arg Leu Phe Gln Pro Tyr 945 950 955 960

Tyr Phe His Glu Pro Pro Glu Pro Gln Pro Pro Val Thr Pro Asp Ala 965 970 975

Leu

<210> 184

<211> 540

<212> PRT

<213> Homo sapiens

<400> 184

Met Asn Gly Glu Ala Ile Cys Ser Ala Leu Pro Thr Ile Pro Tyr His
1 5 10 15

Lys Leu Ala Asp Leu Arg Tyr Leu Ser Arg Gly Ala Ser Gly Thr Val 20 25 30

Ser Ser Ala Arg His Ala Asp Trp Arg Val Gln Val Ala Val Lys His 35 40 45

Leu His Ile His Thr Pro Leu Leu Asp Ser Glu Arg Lys Asp Val Leu 50 55 60

Arg Glu Ala Glu Ile Leu His Lys Ala Arg Phe Ser Tyr Ile Leu Pro 65 70 75 80

Ile Leu Gly Ile Cys Asn Glu Pro Glu Phe Leu Gly Ile Val Thr Glu 85 90 95

Tyr Met Pro Asn Gly Ser Leu Asn Glu Leu Leu His Arg Lys Thr Glu
100 105 110

Tyr Pro Asp Val Ala Trp Pro Leu Arg Phe Arg Ile Leu His Glu Ile 115 120 125

Ala Leu Gly Val Asn Tyr Leu His Asn Met Thr Pro Pro Leu Leu His 130 135 140

His As	sp Leu	Lys	Thr	Gln 150	Asn	Ile	Leu	Leu	Asp 155	Asn	Glu	Phe	His	Val 160
Lys Il	le Ala	Asp	Phe 165	Gly	Leu	Ser	Lys	Trp 170	Arg	Met	Met	Ser	Leu 175	Ser
Gln Se	er Arg	Ser 180	Ser	Lys	Ser	Ala	Pro 185	Glu	Gly	Gly	Thr	Ile 190	Ile	Tyr
Met Pr	o Pro 195	Glu	Asn	Tyr	Glu	Pro 200	Gly	Gln	Lys	Ser	Arg 205	Ala	Ser	Ile
Lys Hi 21	_	Ile	Tyr	Ser	Tyr 215	Ala	Val	Ile	Thr	Trp 220	Glu	Val	Leu	Ser
Arg Ly 225	/s Gln	Pro	Phe	Glu 230	Asp	Val	Thr	Asn	Pro 235	Leu	Gln	Ile	Met	Tyr 240
Ser Va	al Ser	Gln	Gly 245	His	Arg	Pro	Val	Ile 250	Asn	Glu	Glu	Ser	Leu 255	Pro
Tyr As	sp Ile	Pro 260	His	Arg	Ala	Arg	Met 265	Ile	Ser	Leu	Ile	Glu 270	Ser	Gly
Trp Al	la Gln 275	Asn	Pro	Asp	Glu	Arg 280	Pro	Ser	Phe	Leu	Lys 285	Cys	Leu	Ile
Glu Le		Pro	Val	Leu	Arg 295	Thr	Phe	Glu	Glu	Ile 300	Thr	Phe	Leu	Glu
Ala Va 305	al Ile	Gln	Leu	Lys 310	Lys	Thr	Lys	Leu	Gln 315	Ser	Val	Ser	Ser	Ala 320
Ile Hi	is Leu	Cys	Asp 325	Lys	Lys	Lys	Met	Glu 330	Leu	Ser	Leu	Asn	Ile 335	Pro
Val As	sn His	Gly 340	Pro	Gln	Glu	Glu	Ser 345	Cys	Gly	Ser	Ser	Gln 350	Leu	His
Glu As	sn Ser 355	Gly	Ser	Pro	Glu	Thr 360	Ser	Arg	Ser	Leu	Pro 365	Ala	Pro	Gln
Asp As	sn Asp 70	Phe	Leu	Ser	Arg 375	Lys	Ala	Gln	Asp	Cys 380	Tyr	Phe	Met	Lys
Leu Hi 385	is His	Cys	Pro	Gly 390	Asn	His	Ser	Trp	Asp 395	Ser	Thr	Ile	Ser	Gly 400
Ser G	ln Arg	Ala	Ala 405	Phe	Cys	Asp	His	Lys 410	Thr	Thr	Pro	Cys	Ser 415	Ser
Ala II	le Ile	Asn 420	Pro	Leu	Ser	Thr	Ala 425	Gly	Asn	Ser	Glu	Arg 430	Leu	Gln
Pro G	ly Ile 435		Gln	Gln	Trp	Ile 440	Gln	Ser	Lys	Arg	Glu 445	Asp	Ile	Val

Asn Gln Met Thr Glu Ala Cys Leu Asn Gln Ser Leu Asp Ala Leu Leu 450 455 Ser Arg Asp Leu Ile Met Lys Glu Asp Tyr Glu Leu Val Ser Thr Lys 470 475 Pro Thr Arg Thr Ser Lys Val Arg Gln Leu Leu Asp Thr Thr Asp Ile Gln Gly Glu Glu Phe Ala Lys Val Ile Val Gln Lys Leu Lys Asp Asn Lys Gln Met Gly Leu Gln Pro Tyr Pro Glu Ile Leu Val Val Ser Arg 520 Ser Pro Ser Leu Asn Leu Leu Gln Asn Lys Ser Met 535 <210> 185 <211> 689 <212> PRT <213> Homo sapiens <400> 185 Met Ala Asp Leu Glu Ala Val Leu Ala Asp Val Ser Tyr Leu Met Ala Met Glu Lys Ser Lys Ala Thr Pro Ala Ala Arg Ala Ser Lys Lys Ile Leu Leu Pro Glu Pro Ser Ile Arg Ser Val Met Gln Lys Tyr Leu Glu 40 Asp Arg Gly Glu Val Thr Phe Glu Lys Ile Phe Ser Gln Lys Leu Gly Tyr Leu Leu Phe Arg Asp Phe Cys Leu Asn His Leu Glu Glu Ala Arg Pro Leu Val Glu Phe Tyr Glu Glu Ile Lys Lys Tyr Glu Lys Leu Glu Thr Glu Glu Glu Arg Val Ala Arg Ser Arg Glu Ile Phe Asp Ser Tyr 105 Ile Met Lys Glu Leu Leu Ala Cys Ser His Pro Phe Ser Lys Ser Ala 115 120 Thr Glu His Val Gln Gly His Leu Gly Lys Lys Gln Val Pro Pro Asp 135 Leu Phe Gln Pro Tyr Ile Glu Glu Ile Cys Gln Asn Leu Arg Gly Asp 145 150 155 Val Phe Gln Lys Phe Ile Glu Ser Asp Lys Phe Thr Arg Phe Cys Gln 165 170 175

Trp	Lys	Asn	Val 180	Glu	Leu	Asn	Ile	His 185	Leu	Thr	Met	Asn	Asp 190	Phe	Ser
Val	His	Arg 195	Ile	Ile	Gly	Arg	Gly 200	Gly	Phe	Gly	Glu	Val 205	Tyr	Gly	Cys
Arg	Lys 210	Arg	Asp	Thr	Gly	Lys 215	Met	Tyr	Ala	Met	Lys 220	Cys	Leu	Asp	Lys
Lys 225	Arg	Ile	Lys	Met	Lys 230	Gln	Gly	Glu	Thr	Leu 235	Ala	Leu	Asn	Glu	Arg 240
Ile	Met	Leu	Ser	Leu 245	Val	Ser	Thr	Gly	Asp 250	Cys	Pro	Phe	Ile	Val 255	Cys
Met	Ser	Tyr	Ala 260	Phe	His	Thr	Pro	Asp 265	Lys	Leu	Ser	Phe	Ile 270	Leu	Asp
Leu	Met	Asn 275	Gly	Gly	Asp	Leu	His 280	Tyr	His	Leu	Ser	Gln 285	His	Gly	Val
Phe	Ser 290	Glu	Ala	Asp	Met	Arg 295	Phe	Tyr	Ala	Ala	Glu 300	Ile	Ile	Leu	Gly
Leu 305	Glu	His	Met	His	Asn 310	Arg	Phe	Val	Val	Tyr 315	Arg	Asp	Leu	Lys	Pro 320
Ala	Asn	Ile	Leu	Leu 325	Asp	Glu	His	Gly	His 330	Val	Arg	Ile	Ser	Asp 335	Leu
Gly	Leu	Ala	Cys 340	Asp	Phe	Ser	Lys	Lys 345	Lys	Pro	His	Ala	Ser 350	Val	Gly
Thr	His	Gly 355	Tyr	Met	Ala	Pro	Glu 360	Val	Leu	Gln	Lys	Gly 365	Val	Ala	Tyr
_	370				Trp	375					380				
Leu 385	Arg	Gly	His	Ser	Pro 390	Phe	Arg	Gln	His	Lys 395	Thr	Lys	Asp	Lys	His 400
Glu	Ile	Asp	Arg	Met 405	Thr	Leu	Thr	Met	Ala 410	Val	Glu	Leu	Pro	Asp 415	Ser
Phe	Ser	Pro	Glu 420	Leu	His	Ser	Leu	Leu 425	Glu	Gly	Leu	Leu	Gln 430	Arg	Asp
Val	Asn	Arg 435	Arg	Leu	Gly	Cys	Leu 440	Gly	Arg	Gly	Ala	Gln 445	Glu	Val	Lys
Glu	Ser 450	Pro	Phe	Phe	Arg	Ser 455	Leu	Asp	Trp	Gln	Met 460	Val	Phe	Leu	Gln
Arg 465	Tyr	Pro	Pro	Pro	Leu 470	Ile	Pro	Pro	Arg	Gly 475	Glu	Val	Asn	Ala	Ala 480

Asp Ala Phe Asp Ile Gly Ser Phe Asp Glu Glu Asp Thr Lys Gly Ile 490 485 Lys Leu Leu Asp Ser Asp Gln Glu Leu Tyr Arg Asn Phe Pro Leu Thr 505 Ile Ser Glu Arg Trp Gln Gln Glu Val Ala Glu Thr Val Phe Asp Thr 520 525 515 Ile Asn Ala Glu Thr Asp Arg Leu Glu Ala Arg Lys Lys Ala Lys Asn Lys Gln Leu Gly His Glu Glu Asp Tyr Ala Leu Gly Lys Asp Cys Ile 545 560 555 Met His Gly Tyr Met Ser Lys Met Gly Asn Pro Phe Leu Thr Gln Trp 565 570 Gln Arg Arg Tyr Phe Tyr Leu Phe Pro Asn Arg Leu Glu Trp Arg Gly 585 Glu Gly Glu Ala Pro Gln Ser Leu Leu Thr Met Glu Glu Ile Gln Ser 595 Val Glu Glu Thr Gln Ile Lys Glu Arg Lys Cys Leu Leu Lys Ile .620 Arg Gly Gly Lys Gln Phe Ile Leu Gln Cys Asp Ser Asp Pro Glu Leu 635 Val Gln Trp Lys Lys Glu Leu Arg Asp Ala Tyr Arg Glu Ala Gln Gln 645 650 Leu Val Gln Arg Val Pro Lys Met Lys Asn Lys Pro Arg Ser Pro Val 665 Val Glu Leu Ser Lys Val Pro Leu Val Gln Arg Gly Ser Ala Asn Gly 675 Leu

<210> 186

<211> 505

<212> PRT

<213> Homo sapiens

<400> 186

Met Gly Leu Val Ser Ser Lys Lys Pro Asp Lys Glu Lys Pro Ile Lys 1 5 10 15

Glu Lys Asp Lys Gly Gln Trp Ser Pro Leu Lys Val Ser Ala Gln Asp
20 25 30

Lys Asp Ala Pro Pro Leu Pro Pro Leu Val Val Phe Asn His Leu Thr

Pro Pro Pro Pro Asp Glu His Leu Asp Glu Asp Lys His Phe Val Val Ala Leu Tyr Asp Tyr Thr Ala Met Asn Asp Arg Asp Leu Gln Met Leu 70 Lys Gly Glu Lys Leu Gln Val Leu Lys Gly Thr Gly Asp Trp Trp Leu 90 Ala Arg Ser Leu Val Thr Gly Arg Glu Gly Tyr Val Pro Ser Asn Phe 105 110 Val Ala Arg Val Glu Ser Leu Glu Met Glu Arg Trp Phe Phe Arg Ser 120 Gln Gly Arg Lys Glu Ala Glu Arg Gln Leu Leu Ala Pro Ile Asn Lys 135 Ala Gly Ser Phe Leu Ile Arg Glu Ser Glu Thr Asn Lys Gly Ala Phe 150 Ser Leu Ser Val Lys Asp Val Thr Thr Gln Gly Glu Leu Ile Lys His 170 Tyr Lys Ile Arg Cys Leu Asp Glu Gly Gly Tyr Tyr Ile Ser Pro Arg Ile Thr Phe Pro Ser Leu Gln Ala Leu Val Gln His Tyr Ser Lys Lys 200 Gly Asp Gly Leu Cys Gln Arg Leu Thr Leu Pro Cys Val Arg Pro Ala 215 Pro Gln Asn Pro Trp Ala Gln Asp Glu Trp Glu Ile Pro Arg Gln Ser 240 225 Leu Arg Leu Val Arg Lys Leu Gly Ser Gly Gln Phe Gly Glu Val Trp 250 Met Gly Tyr Tyr Lys Asn Asn Met Lys Val Ala Ile Lys Thr Leu Lys 265 Glu Gly Thr Met Ser Pro Glu Ala Phe Leu Gly Glu Ala Asn Val Met 275 Lys Ala Leu Gln His Glu Arq Leu Val Arq Leu Tyr Ala Val Val Thr 295 Lys Glu Pro Ile Tyr Ile Val Thr Glu Tyr Met Ala Arg Gly Cys Leu 305 Leu Asp Phe Leu Lys Thr Asp Glu Gly Ser Arg Leu Ser Leu Pro Arg

Leu Ile Asp Met Ser Ala Gln Ile Ala Glu Gly Met Ala Tyr Ile Glu

Arg Met Asn Ser Ile His Arg Asp Leu Arg Ala Ala Asn Ile Leu Val 355 360 365

Ser Glu Ala Leu Cys Cys Lys Ile Ala Asp Phe Gly Leu Ala Arg Ile 370 375 380

Ile Asp Ser Glu Tyr Thr Ala Gln Glu Gly Ala Lys Phe Pro Ile Lys 385 390 395 400

Trp Thr Ala Pro Glu Ala Tyr His Phe Gly Val Phe Thr Ile Lys Ala 405 410 415

Asp Val Trp Ser Phe Gly Val Leu Leu Met Glu Val Val Thr Tyr Gly
420 425 430

Arg Val Pro Tyr Pro Gly Met Ser Asn Pro Glu Val Ile Arg Asn Leu 435 440 445

Glu Arg Gly Tyr Arg Met Pro Arg Pro Asp Thr Cys Pro Pro Glu Leu 450 455 460

Tyr Arg Gly Val Ile Ala Glu Cys Trp Arg Ser Arg Pro Glu Glu Arg 465 470 475 480

Pro Thr Phe Glu Phe Leu Gln Ser Val Leu Glu Asp Phe Tyr Thr Ala 485 490 495

Thr Glu Arg Gln Tyr Glu Leu Gln Pro 500 505

<210> 187

<211> 298

<212> PRT

<213> Homo sapiens

<400> 187

Met Glu Asn Phe Gln Lys Val Glu Lys Ile Gly Glu Gly Thr Tyr Gly
1 5 10 15

Val Val Tyr Lys Ala Arg Asn Lys Leu Thr Gly Glu Val Val Ala Leu 20 25 30

Lys Lys Ile Arg Leu Asp Thr Glu Thr Glu Gly Val Pro Ser Thr Ala 35 40 45

Ile Arg Glu Ile Ser Leu Leu Lys Glu Leu Asn His Pro Asn Ile Val 50 55 60

Lys Leu Leu Asp Val Ile His Thr Glu Asn Lys Leu Tyr Leu Val Phe 65 70 75 80

Glu Phe Leu His Gln Asp Leu Lys Lys Phe Met Asp Ala Ser Ala Leu 85 90 95 Thr Gly Ile Pro Leu Pro Leu Ile Lys Ser Tyr Leu Phe Gln Leu Leu Gln Gly Leu Ala Phe Cys His Ser His Arg Val Leu His Arg Asp Leu Lys Pro Gln Asn Leu Leu Ile Asn Thr Glu Gly Ala Ile Lys Leu Ala Asp Phe Gly Leu Ala Arg Ala Phe Gly Val Pro Val Arg Thr Tyr Thr His Glu Val Val Thr Leu Trp Tyr Arg Ala Pro Glu Ile Leu Leu Gly 170 Ser Lys Tyr Tyr Ser Thr Ala Val Asp Ile Trp Ser Leu Gly Cys Ile 185 Phe Ala Glu Met Val Thr Arg Arg Ala Leu Phe Pro Gly Asp Ser Glu 195 200 205 Ile Asp Gln Leu Phe Arg Ile Phe Arg Thr Leu Gly Thr Pro Asp Glu 215 Val Val Trp Pro Gly Val Thr Ser Met Pro Asp Tyr Lys Pro Ser Phe 225 230 235 240 Pro Lys Trp Ala Arg Gln Asp Phe Ser Lys Val Val Pro Pro Leu Asp 250 Glu Asp Gly Arg Ser Leu Leu Ser Gln Met Leu His Tyr Asp Pro Asn 265 Lys Arg Ile Ser Ala Lys Ala Ala Leu Ala His Pro Phe Phe Gln Asp 275 280 285 Val Thr Lys Pro Val Pro His Leu Arg Leu 290 295 <210> 188 <211> 387 <212> PRT <213> Homo sapiens <400> 188 Met Thr Arg Asp Glu Ala Leu Pro Asp Ser His Ser Ala Gln Asp Phe Tyr Glu Asn Tyr Glu Pro Lys Glu Ile Leu Gly Arg Gly Val Ser Ser 25 Val Val Arg Arg Cys Ile His Lys Pro Thr Ser Gln Glu Tyr Ala Val 40 Lys Val Ile Asp Val Thr Gly Gly Ser Phe Ser Pro Glu Glu Val

55

Arg Glu 1	Leu Arg	Glu A		Leu	Lys	Glu	Val 75	Asp	Ile	Leu	Arg	Lys 80
Val Ser (Gly His	Pro As	sn Ile	Ile	Gln	Leu 90	Lys	Asp	Thr	Tyr	Glu 95	Thr
Asn Thr	Phe Phe 100	Phe L	eu Val	Phe	Asp 105	Leu	Met	Lys	Arg	Gly 110	Glu	Leu
Phe Asp	Tyr Leu 115	Thr G	lu Lys	Val 120	Thr	Leu	Ser	Glu	Lys 125	Glu	Thr	Arg
Lys Ile I 130	Met Arg	Ala L	eu Leu 135	Glu	Val	Ile	Cys	Thr 140	Leu	His	Lys	Leu
Asn Ile 1 145	Val His	_	sp Leu 50	Lys	Pro	Glu	Asn 155	Ile	Leu	Leu	Asp	Asp 160
Asn Met i	Asn Ile	Lys Lo	eu Thr	Asp	Phe	Gly 170	Phe	Ser	Cys	Gln	Leu 175	Glu
Pro Gly	Glu Arg 180	Leu A	rg Glu	Val	Cys 185	Gly	Thr	Pro	Ser	Tyr 190	Leu	Ala
Pro Glu	Ile Ile 195	Glu C	ys Ser	Met 200	Asn	Glu	Asp	His	Pro 205	Gly	Tyr	Gly
Lys Glu ' 210	Val Asp	Met T	rp Ser 215	Thr	Gly	Val	Ile	Met 220	Tyr	Thr	Leu	Leu
Ala Gly a	Ser Pro		he Trp 30	His	Arg	Lys	Gln 235	Met	Leu	Met	Leu	Arg 240
Met Ile 1	Met Ser	Gly A 245	sn Tyr	Gln	Phe	Gly 250	Ser	Pro	Glu	Trp	Asp 255	Asp
Tyr Ser	Asp Thr 260	Val L	ys Asp	Leu	Val 265	Ser	Arg	Phe	Leu	Val 270	Val	Gln
Pro Gln	Asn Arg 275	Tyr T	hr Ala	Glu 280	Glu	Ala	Leu	Ala	His 285	Pro	Phe	Phe
Gln Gln ' 290	Tyr Leu	Val G	lu Glu 295		Arg	His	Phe	Ser 300	Pro	Arg	Gly	Lys
Phe Lys 305	Val Ile		eu Thr 10	Val	Leu	Ala	Ser 315	Val	Arg	Ile	Tyr	Tyr 320
Gln Tyr .	Arg Arg	Val L 325	ys Pro	Val	Thr	Arg 330	Glu	Ile	Val	Ile	Arg 335	Asp
Pro Tyr	Ala Leu 340	Arg P	ro Leu	Arg	Arg 345	Leu	Ile	Asp	Ala	Tyr 350	Ala	Phe
Arg Ile	Tyr Gly 355	His T	rp Val	Lys 360	Lys	Gly	Gln	Gln	Gln 365	Asn	Arg	Ala

Ala Leu Phe Glu Asn Thr Pro Lys Ala Val Leu Leu Ser Leu Ala Glu 370 375 380

Glu Asp Tyr 385

<210> 189

<211> 314

<212> PRT

<213> Homo sapiens

<400> 189

Met Gly Arg Cys Arg Ser Val Lys Glu Phe Glu Lys Leu Asn Arg Ile 1 5 10 15

Gly Glu Gly Thr Tyr Gly Ile Val Tyr Arg Ala Arg Asp Thr Gln Thr 20 25 30

Asp Glu Ile Val Ala Leu Lys Lys Val Arg Met Asp Lys Glu Lys Asp 35 40 45

Gly Ile Pro Ile Ser Ser Leu Arg Glu Ile Thr Leu Leu Leu Arg Leu 50 55 60

Arg His Pro Asn Ile Val Glu Leu Lys Glu Val Val Val Gly Asn His 65 70 75 80

Leu Glu Ser Ile Phe Leu Val Met Gly Tyr Cys Glu Gln Asp Leu Ala 85 90 95

Ser Leu Leu Glu Asn Met Pro Thr Pro Phe Ser Glu Ala Gln Val Lys 100 105 110

Cys Ile Val Leu Gln Val Leu Arg Gly Leu Gln Tyr Leu His Arg Asn 115 120 125

Phe Ile Ile His Arg Asp Leu Lys Val Ser Asn Leu Leu Met Thr Asp 130 135 140

Lys Gly Cys Val Lys Thr Ala Asp Phe Gly Leu Ala Arg Ala Tyr Gly
145 150 155 160

Val Pro Val Lys Pro Met Thr Pro Lys Val Val Thr Leu Trp Tyr Arg 165 170 175

Ala Pro Glu Leu Leu Gly Thr Thr Thr Gln Thr Thr Ser Ile Asp 180 185 190

Met Trp Ala Val Gly Cys Ile Leu Ala Glu Leu Leu Ala His Arg Pro 195 200 205

Leu Leu Pro Gly Thr Ser Glu Ile His Gln Ile Asp Leu Ile Val Gln 210 215 220

Leu Leu Gly Thr Pro Ser Glu Asn Ile Trp Pro Gly Phe Ser Lys Leu

Pro Leu Val Gly Gln Tyr Ser Leu Arg Lys Gln Pro Tyr Asn Asn Leu 245 250 255

Lys His Lys Phe Pro Trp Leu Ser Glu Ala Gly Leu Arg Leu Leu His
260 265 270

Phe Leu Phe Met Tyr Asp Pro Lys Lys Arg Ala Thr Ala Gly Asp Cys 275 280 285

Leu Glu Ser Ser Tyr Phe Lys Glu Lys Pro Leu Arg Leu Pro Ile Ser 290 295 300

Gly Val Cys Glu Gly Cys Arg Glu Pro Gly 305 310

<210> 190

<211> 314

<212> PRT

<213> Homo sapiens

<400> 190

Met Gly Arg Cys Arg Ser Val Lys Glu Phe Glu Lys Leu Asn Arg Ile 1 5 10 15

Gly Glu Gly Thr Tyr Gly Ile Val Tyr Arg Ala Arg Asp Thr Gln Thr 20 25 30

Asp Glu Ile Val Ala Leu Lys Lys Val Arg Met Asp Lys Glu Lys Asp 35 40 45

Gly Ile Pro Ile Ser Ser Leu Arg Glu Ile Thr Leu Leu Leu Arg Leu 50 55 60

Arg His Pro Asn Ile Val Glu Leu Lys Glu Val Val Val Gly Asn His 70 75 80

Leu Glu Ser Ile Phe Leu Val Met Gly Tyr Cys Glu Gln Asp Leu Ala 85 90 95

Ser Leu Leu Glu Asn Met Pro Thr Pro Phe Ser Glu Ala Gln Val Lys 100 105 110

Cys Ile Val Leu Gln Val Leu Arg Gly Leu Gln Tyr Leu His Arg Asn 115 120 125

Phe Ile Ile His Arg Asp Leu Lys Val Ser Asn Leu Leu Met Thr Asp 130 135 140

Lys Gly Cys Val Lys Thr Ala Asp Phe Gly Leu Ala Arg Ala Tyr Gly
145 150 155 160

Val Pro Val Lys Pro Met Thr Pro Lys Val Val Thr Leu Trp Tyr Arg 165 170 175 Ala Pro Glu Leu Leu Leu Gly Thr Thr Thr Gln Thr Thr Ser Ile Asp 180

Met Trp Ala Val Gly Cys Ile Leu Ala Glu Leu Leu Ala His Arg Pro 200

Leu Leu Pro Gly Thr Ser Glu Ile His Gln Ile Asp Leu Ile Val Gln 210 215 220

Leu Leu Gly Thr Pro Ser Glu Asn Ile Trp Pro Gly Phe Ser Lys Leu 225 230 235 240

Pro Leu Val Gly Gln Tyr Ser Leu Arg Lys Gln Pro Tyr Asn Asn Leu 245 250 255

Lys His Lys Phe Pro Trp Leu Ser Glu Ala Gly Leu Arg Leu Leu His 260 265 270

Phe Leu Phe Met Tyr Asp Pro Lys Lys Arg Ala Thr Ala Gly Asp Cys 275 280 285

Leu Glu Ser Ser Tyr Phe Lys Glu Lys Pro Leu Arg Leu Pro Ile Ser 290 295 300

Gly Val Cys Glu Gly Cys Arg Glu Pro Gly 305 310

<210> 191

<211> 314

<212> PRT

<213> Homo sapiens

<400> 191

Met Gly Arg Cys Arg Ser Val Lys Glu Phe Glu Lys Leu Asn Arg Ile 1 5 10 15

Gly Glu Gly Thr Tyr Gly Ile Val Tyr Arg Ala Arg Asp Thr Gln Thr 20 25 30

Asp Glu Ile Val Ala Leu Lys Lys Val Arg Met Asp Lys Glu Lys Asp 35 40 45

Gly Ile Pro Ile Ser Ser Leu Arg Glu Ile Thr Leu Leu Leu Arg Leu 50 55 60

Arg His Pro Asn Ile Val Glu Leu Lys Glu Val Val Val Gly Asn His 65 70 75 80

Leu Glu Ser Ile Phe Leu Val Met Gly Tyr Cys Glu Gln Asp Leu Ala 85 90 95

Ser Leu Leu Glu Asn Met Pro Thr Pro Phe Ser Glu Ala Gln Val Lys
100 105 110

Cys Ile Val Leu Gln Val Leu Arg Gly Leu Gln Tyr Leu His Arg Asn 115 120 125 Phe Ile Ile His Arg Asp Leu Lys Val Ser Asn Leu Leu Met Thr Asp 135 Lys Gly Cys Val Lys Thr Ala Asp Phe Gly Leu Ala Arg Ala Tyr Gly 150 155 Val Pro Val Lys Pro Met Thr Pro Lys Val Val Thr Leu Trp Tyr Arg 170 165 Ala Pro Glu Leu Leu Gly Thr Thr Thr Gln Thr Thr Ser Ile Asp 185 Met Trp Ala Val Gly Cys Ile Leu Ala Glu Leu Leu Ala His Arg Pro Leu Leu Pro Gly Thr Ser Glu Ile His Gln Ile Asp Leu Ile Val Gln 215 Leu Leu Gly Thr Pro Ser Glu Asn Ile Trp Pro Gly Phe Ser Lys Leu Pro Leu Val Gly Gln Tyr Ser Leu Arg Lys Gln Pro Tyr Asn Asn Leu Lys His Lys Phe Pro Trp Leu Ser Glu Ala Gly Leu Arg Leu Leu His 265 Phe Leu Phe Met Tyr Asp Pro Lys Lys Arg Ala Thr Ala Gly Asp Cys Leu Glu Ser Ser Tyr Phe Lys Glu Lys Pro Leu Arg Leu Pro Ile Ser 290 295 300 Gly Val Cys Glu Gly Cys Arg Glu Pro Gly 310 <210> 192 <211> 887 <212> PRT <213> Homo sapiens

<400> 192

Met Gly Glu Ala Glu Lys Phe His Tyr Ile Tyr Ser Cys Asp Leu Asp 1 5 10 15

Ile Asn Val Gln Leu Lys Ile Gly Ser Leu Glu Gly Lys Arg Glu Gln 20 25 30

Lys Ser Tyr Asn Ala Val Leu Glu Asp Pro Met Leu Lys Phe Ser Gly
35 40 45

Leu Tyr Gln Glu Thr Cys Ser Asp Leu Tyr Val Thr Cys Gln Val Phe 50 55 60

Ala Glu Gly Lys Pro Ser Ala Leu Pro Val Arg Thr Ser Tyr Lys Ala

Phe Ser Thr Arg Trp Asn Trp Asn Glu Trp Leu Lys Leu Pro Val Lys 85 90 95

65

Tyr Pro Asp Leu Pro Arg Asn Ala Gln Val Ala Leu Thr Ile Trp Asp 100 105 110

Val Tyr Gly Pro Gly Lys Ala Val Pro Val Gly Gly Thr Thr Val Ser 115 120 125

Leu Phe Gly Lys Tyr Gly Met Ser Arg Gln Gly Met His Asp Leu Lys 130 135 140

Val Trp Pro Asn Val Glu Ala Asp Gly Ser Glu Pro Thr Asn Thr Pro 145 150 155 160

Gly Arg Thr Ser Ser Thr Leu Ser Glu Asp Gln Met Ser Arg Leu Ala 165 170 175

Lys Leu Thr Lys Ala His Arg Gln Gly His Met Val Lys Val Asp Trp
180 185 190

Leu Asp Arg Leu Thr Phe Arg Glu Ile Glu Met Ile Asn Glu Ser Val 195 200 205

Lys Arg Ser Ser Asn Phe Met Tyr Leu Met Gly Gly Phe Arg Cys Val 210 215 220

Lys Cys Asp Asp Lys Glu Tyr Gly Ile Val Tyr Tyr Glu Lys Asp Gly 225 230 235 240

Asp Glu Ser Ser Pro Ile Leu Thr Ser Phe Glu Leu Val Lys Val Pro 245 250 255

Asp Pro Gln Met Ser Leu Glu Asn Leu Val Glu Ser Lys His His Asn 260 265 270

Leu Pro Arg Ser Leu Arg Ser Gly Pro Ser Asp His Asp Leu Lys Pro 275 280 285

Tyr Pro Ser Pro Arg Asp Gln Leu Lys Asn Ile Val Ser Tyr Pro Pro 290 295 300

Ser Lys Pro Pro Thr Tyr Glu Glu Gln Asp Leu Val Trp Glu Phe Arg 305 310 315 320

Tyr Tyr Leu Thr Asn Gln Asp Lys Ala Leu Thr Lys Ile Leu Thr Ser 325 330 335

Val Ile Trp Asp Leu Pro Gln Gly Ala Lys Gln Ala Leu Ala Leu Leu 340 345 350

Gly Lys Trp Asn Pro Met Asp Val Glu Asp Ser Leu Glu Leu Ile Ser 355 360 365

Ser His Tyr Thr Asn Pro Thr Val Arg Arg Tyr Ala Val Ala Arg Leu

Arg 385	Gln	Ala	Asp	Asp	Glu 390	Asp	Leu	Leu	Met	Tyr 395	Leu	Ser	Gln	Leu	Val 400
Gln	Ala	Leu	Lys	Tyr 405	Glu	Asn	Phe	Asp	Asp 410	Ile	Lys	Asn	Gly	Leu 415	Glu
Pro	Thr	Lys	Lys 420	Asp	Ser	Gln	Ser	Ser 425	Val	Ser	Gly	Asn	Val 430	Ser	Asn
Ser	Gly	Ile 435	Asn	Ser	Ala	Glu	Ile 440	Asp	Ser	Ser	Gln	Ile 445	Ile	Thr	Ser
Pro	Leu 450	Pro	Ser	Val	Ser	Ser 455	Pro	Pro	Pro	Ala	Ser 460	Lys	Thr	Lys	Glu
Val 465	Pro	Asp	Gly	Glu	Asn 470	Leu	Glu	Gln	Asp	Leu 475	Cys	Thr	Phe	Leu	Ile 480
Ser	Arg	Ala	Ser	Lys 485	Asn	Ser	Thr	Leu	Ala 490	Asn	Tyr	Leu	Tyr	Trp 495	Tyr
Val	Ile	Val	Glu 500	Cys	Glu	Asp	Gln	Asp 505	Thr	Gln	Gln	Arg	Asp 510	Pro	Lys
Thr	His	Glu 515	Met	Tyr	Leu	Asn	Val 520	Met	Arg	Arg	Phe	Ser 525	Gln	Ala	Leu
Leu	Lys 530	Gly	Asp	Lys	Ser	Val 535	Arg	Val	Met	Arg	Ser 540	Leu	Leu	Ala	Ala
Gln 545	Gln	Thr	Phe	Val	Asp 550	Arg	Leu	Val	His	Leu 555	Met	Lys	Ala	Val	Gln 560
Arg	Glu	Ser	Gly	Asn 565	Arg	Lys	Lys	Lys	Asn 570	Glu	Arg	Leu	Gln	Ala 575	Leu
Leu	Gly	Asp	Asn 580	Glu	Lys	Met	Asn	Leu 585	Ser	Asp	Val	Glu	Leu 590	Ile	Pro
Leu	Pro	Leu 595	Glu	Pro	Gln	Val	Lys 600	Ile	Arg	Gly	Ile	Ile 605	Pro	Glu	Thr
Ala	Thr 610	Leu	Phe	Lys	Ser	Ala 615	Leu	Met	Pro	Ala	Gln 620	Leu	Phe	Phe	Lys
Thr 625	Glu	Asp	Gly	Gly	Lys 630	Tyr	Pro	Val	Ile	Phe 635	Lys	His	Gly	Asp	Asp 640
Leu	Arg	Gln	Asp	Gln 645	Leu	Ile	Leu	Gln	Ile 650	Ile	Ser	Leu	Met	Asp 655	Lys
Leu	Leu	Arg	Lys 660	Glu	Asn	Leu	Asp	Leu 665	Lys	Leu	Thr	Pro	Tyr 670	Lys	Val
Leu	Ala	Thr	Ser	Thr	Lys	His	Gly	Phe	Met	Gln	Phe	Ile	Gln	Ser	Val

675 680 685

Pro Val Ala Glu Val Leu Asp Thr Glu Gly Ser Ile Gln Asn Phe Phe 690 695 700

Arg Lys Tyr Ala Pro Ser Glu Asn Gly Pro Asn Gly Ile Ser Ala Glu 705 710 715 720

Val Met Asp Thr Tyr Val Lys Ser Cys Ala Gly Tyr Cys Val Ile Thr 725 730 735

Tyr Ile Leu Gly Val Gly Asp Arg His Leu Asp Asn Leu Val Leu Thr
740 745 750

Lys Thr Gly Lys Leu Phe His Ile Asp Phe Gly Tyr Ile Leu Gly Arg
755 760 765

Asp Pro Lys Pro Leu Pro Pro Pro Met Lys Leu Asn Lys Glu Met Val 770 780

Glu Gly Met Gly Gly Thr Gln Ser Glu Gln Tyr Gln Glu Phe Arg Lys 785 790 795 800

Gln Cys Tyr Thr Ala Phe Leu His Leu Arg Arg Tyr Ser Asn Leu Ile 805 810 815

Leu Asn Leu Phe Ser Leu Met Val Asp Pro Asn Ile Pro Asp Ile Ala 820 825 830

Leu Glu Pro Asp Lys Thr Val Lys Lys Val Gln Asp Lys Phe Arg Leu 835 840 845

Asp Leu Ser Asp Glu Glu Ala Val His Tyr Met Gln Ser Leu Ile Asp 850 855 860

Glu Ser Val His Ala Leu Phe Ala Ala Val Val Glu Gln Ile His Lys 865 870 875 880

Phe Ala Gln Tyr Trp Arg Lys 885

<210> 193

<211> 887

<212> PRT

<213> Homo sapiens

<400> 193

Met Gly Glu Ala Glu Lys Phe His Tyr Ile Tyr Ser Cys Asp Leu Asp 1 5 10 15

Ile Asn Val Gln Leu Lys Ile Gly Ser Leu Glu Gly Lys Arg Glu Gln
20 25 30

Lys Ser Tyr Asn Ala Val Leu Glu Asp Pro Met Leu Lys Phe Ser Gly 35 40 45

Leu	Tyr 50	Gln	Glu	Thr	Cys	Ser 55	Asp	Leu	Tyr	Val	Thr 60	Cys	Gln	Val	Phe
Ala 65	Glu	Gly	Lys	Pro	Ser 70	Ala	Leu	Pro	Val	Arg 75	Thr	Ser	Tyr	Lys	Ala 80
Phe	Ser	Thr	Arg	Trp 85	Asn	Trp	Asn	Glu	Trp 90	Leu	Lys	Leu	Pro	Val 95	Lys
Tyr	Pro	Asp	Leu 100	Pro	Arg	Asn	Ala	Gln 105	Val	Ala	Leu	Thr	Ile 110	Trp	Asp
Val	Tyr	Gly 115	Pro	Gly	Lys	Ala	Val 120	Pro	Val	Gly	Gly	Thr 125	Thr	Val	Ser
Leu	Phe 130	Gly	Lys	Tyr	Gly	Met 135	Ser	Arg	Gln	Gly	Met 140	His	Asp	Leu	Lys
Val 145	Trp	Pro	Asn	Val	Glu 150	Ala	Asp	Gly	Ser	Glu 155	Pro	Thr	Asn	Thr	Pro 160
Gly	Arg	Thr	Ser	Ser 165	Thr	Leu	Ser	Glu	Asp 170	Gln	Met	Ser	Arg	Leu 175	Ala
Lys	Leu	Thr	Lys 180	Ala	His	Arg	Gln	Gly 185	His	Met	Val	Lys	Val 190	Asp	Trp
Leu	Asp	Arg 195	Leu	Thr	Phe	Arg	Glu 200	Ile	Glu	Met	Ile	Asn 205	Glu	Ser	Val
Lys	Arg 210	Ser	Ser	Asn	Phe	Met 215	Tyr	Leu	Met	Gly	Gly 220	Phe	Arg	Cys	Val
Lys 225	Cys	Asp	Asp	Lys	Glu 230	Tyr	Gly	Ile	Val	Tyr 235	Tyr	Glu	Lys	Asp	Gly 240
Asp	Glu	Ser	Ser	Pro 245	Ile	Leu	Thr	Ser	Phe 250	Glu	Leu	Val	Lys	Val 255	Pro
Asp	Pro	Gln	Met 260	Ser	Leu	Glu	Asn	Leu 265	Val	Glu	Ser	Lys	His 270	His	Asn
Leu	Pro	Arg 275	Ser	Leu	Arg	Ser	Gly 280	Pro	Ser	Asp	His	Asp 285	Leu	Lys	Pro
Tyr	Pro 290	Ser	Pro	Arg	Asp	Gln 295	Leu	Lys	Asn	Ile	Val 300	Ser	Tyr	Pro	Pro
Ser 305	Lys	Pro	Pro	Thr	Tyr 310	Glu	Glu	Gln	Asp	Leu 315	Val	Trp	Glu	Phe	Arg 320
Tyr	Tyr	Leu	Thr	Asn 325	Gln	Asp	Lys	Ala	Leu 330	Thr	Lys	Ile	Leu	Thr 335	Ser
Val	Ile	Trp	Asp 340	Leu	Pro	Gln	Gly	Ala 345	Lys	Gln	Ala	Leu	Ala 350	Leu	Leu

Gly	Lys	Trp 355	Asn	Pro	Met	Asp	Val 360	Glu	Asp	Ser	Leu	Glu 365	Leu	Ile	Ser
Ser	His 370	Tyr	Thr	Asn	Pro	Thr 375	Val	Arg	Arg	Tyr	Ala 380	Val	Ala	Arg	Leu
Arg 385	Gln	Ala	Asp	Asp	Glu 390	Asp	Leu	Leu	Met	Tyr 395	Leu	Ser	Gln	Leu	Val 400
Gln	Ala	Leu	Lys	Tyr 405	Glu	Asn	Phe	Asp	Asp 410	Ile	Lys	Asn	Gly	Leu 415	Glu
Pro	Thr	Lys	Lys 420	Asp	Ser	Gln	Ser	Ser 425	Val	Ser	Gly	Asn	Val 430	Ser	Asn
Ser	Gly	Ile 435	Asn	Ser	Ala	Glu	Ile 440	Asp	Ser	Ser	Gln	Ile 445	Ile	Thr	Ser
Pro	Leu 450	Pro	Ser	Val	Ser	Ser 455	Pro	Pro	Pro	Ala	Ser 460	Lys	Thr	Lys	Glu
Val 465	Pro	Asp	Gly	Glu	Asn 470	Leu	Glu	Gln	Asp	Leu 475	Cys	Thr	Phe	Leu	Ile 480
Ser	Arg	Ala	Ser	Lys 485	Asn	Ser	Thr	Leu	Ala 490	Asn	Tyr	Leu	Tyr	Trp 495	Tyr
Val	Ile	Val	Glu 500	Cys	Glu	Asp	Gln	Asp 505	Thr	Gln	Gln	Arg	Asp 510	Pro	Lys
Thr	His	Glu 515	Met	Tyr	Leu	Asn	Val 520	Met	Arg	Arg	Phe	Ser 525	Gln	Ala	Leu
Leu	Lys 530	Gly	Asp	Lys	Ser	Val 535	Arg	Val	Met	Arg	Ser 540	Leu	Leu	Ala	Ala
545					Asp 550					555					560
				565	Arg				570					575	
	-		580		Lys			585		_			590		
		595			Gln		600					605			
	610				Ser	615					620				
Thr 625	Glu	Asp	Gly	Gly	Lys 630	Tyr	Pro	Val	Ile	Phe 635	Lys	His	Gly	Asp	Asp 640
Leu	Arg	Gln	Asp	Gln 645	Leu	Ile	Leu	Gln	Ile 650	Ile	Ser	Leu	Met	Asp 655	Lys

Leu Leu Arg Lys Glu Asn Leu Asp Leu Lys Leu Thr Pro Tyr Lys Val 660 665 670

Leu Ala Thr Ser Thr Lys His Gly Phe Met Gln Phe Ile Gln Ser Val

675 680 685

Pro Val Ala Glu Val Leu Asp Thr Glu Gly Ser Ile Gln Asn Phe Phe 690 695 700

Arg Lys Tyr Ala Pro Ser Glu Asn Gly Pro Asn Gly Ile Ser Ala Glu 705 710 715 720

Val Met Asp Thr Tyr Val Lys Ser Cys Ala Gly Tyr Cys Val Ile Thr 725 730 735

Tyr Ile Leu Gly Val Gly Asp Arg His Leu Asp Asn Leu Val Leu Thr
740 745 750

Lys Thr Gly Lys Leu Phe His Ile Asp Phe Gly Tyr Ile Leu Gly Arg
755 760 765

Asp Pro Lys Pro Leu Pro Pro Pro Met Lys Leu Asn Lys Glu Met Val 770 775 780

Glu Gly Met Gly Gly Thr Gln Ser Glu Gln Tyr Gln Glu Phe Arg Lys 785 790 795 800

Gln Cys Tyr Thr Ala Phe Leu His Leu Arg Arg Tyr Ser Asn Leu Ile 805 810 815

Leu Asn Leu Phe Ser Leu Met Val Asp Pro Asn Ile Pro Asp Ile Ala 820 825 830

Leu Glu Pro Asp Lys Thr Val Lys Lys Val Gln Asp Lys Phe Arg Leu 835 840 845

Asp Leu Ser Asp Glu Glu Ala Val His Tyr Met Gln Ser Leu Ile Asp 850 855 860

Glu Ser Val His Ala Leu Phe Ala Ala Val Val Glu Gln Ile His Lys 865 870 875 880

Phe Ala Gln Tyr Trp Arg Lys 885

<210> 194

<211> 351

<212> PRT

<213> Homo sapiens

<400> 194

Met Gly Asn Ala Ala Ala Ala Lys Lys Gly Ser Glu Gln Glu Ser Val 1 5 10 15

Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu 20 25 30

Ser	Pro	Ala 35	GIn	Asn	Thr	Ala	His	Leu	Asp	GIn	Phe	GIu 45	Arg	He	Lys
Thr	Leu 50	Gly	Thr	Gly	Ser	Phe 55	Gly	Arg	Val	Met	Leu 60	Val	Lys	His	Lys
Glu 65	Thr	Gly	Asn	His	Tyr 70	Ala	Met	Lys	Ile	Leu 75	Asp	Lys	Gln	Lys	Val 80
Val	Lys	Leu	Lys	Gln 85	Ile	Glu	His	Thr	Leu 90	Asn	Glu	Lys	Arg	Ile 95	Leu
Gln	Ala	Val	Asn 100	Phe	Pro	Phe	Leu	Val 105	Lys	Leu	Glu	Phe	Ser 110	Phe	Lys
Asp	Asn	Ser 115	Asn	Leu	Tyr	Met	Val 120	Met	Glu	Tyr	Val	Pro 125	Gly	Gly	Glu
Met	Phe 130	Ser	His	Leu	Arg	Arg 135	Ile	Gly	Arg	Phe	Ser 140	Glu	Pro	His	Ala
Arg 145	Phe	Tyr	Ala	Ala	Gln 150	Ile	Val	Leu	Thr	Phe 155	Glu	Tyr	Leu	His	Ser 160
Leu	Asp	Leu	Ile	Tyr 165	Arg	Asp	Leu	Lys	Pro 170	Glu	Asn	Leu	Leu	Ile 175	Asp
Gln	Gln	Gly	Tyr 180	Ile	Gln	Val	Thr	Asp 185	Phe	Gly	Phe	Ala	Lys 190	Arg	Val
Lys	Gly	Arg 195	Thr	Trp	Thr	Leu	Cys 200	Gly	Thr	Pro	Glu	Tyr 205	Leu	Ala	Pro
Glu	Ile 210	Ile	Leu	Ser	Lys	Gly 215	Tyr	Asn	Lys	Ala	Val 220	Asp	Trp	Trp	Ala
Leu 225	Gly	Val	Leu	Ile	Tyr 230	Glu	Met	Ala	Ala	Gly 235	Tyr	Pro	Pro	Phe	Phe 240
Ala	Asp	Gln	Pro	Ile 245	Gln	Ile	Tyr	Glu	Lys 250	Ile	Val	Ser	Gly	Lys 255	Val
Arg	Phe	Pro	Ser 260	His	Phe	Ser	Ser	Asp 265	Leu	Lys	Asp	Leu	Leu 270	Arg	Asn
Leu	Leu	Gln 275	Val	Asp	Leu	Thr	Lys 280	Arg	Phe	Gly	Asn	Leu 285	Lys	Asn	Gly
Val	Asn 290	Asp	Ile	Lys	Asn	His 295	Lys	Trp	Phe	Ala	Thr 300	Thr	Asp	Trp	Ile
Ala 305	Ile	Tyr	Gln	Arg	Lys 310	Val	Glu	Ala	Pro	Phe 315	Ile	Pro	Lys	Phe	Lys 320
Gly	Pro	Gly	Asp	Thr 325	Ser	Asn	Phe	Asp	Asp 330	Tyr	Glu	Glu	Glu	Glu 335	Ile

Arg Val Ser Ile Asn Glu Lys Cys Gly Lys Glu Phe Ser Glu Phe 340 345 <210> 195 <211> 737 <212> PRT <213> Homo sapiens <400> 195 Met Val Val Phe Asn Gly Leu Leu Lys Ile Lys Ile Cys Glu Ala Val Ser Leu Lys Pro Thr Ala Trp Ser Leu Arg His Ala Val Gly Pro Arg Pro Gln Thr Phe Leu Leu Asp Pro Tyr Ile Ala Leu Asn Val Asp Asp Ser Arg Ile Gly Gln Thr Ala Thr Lys Gln Lys Thr Asn Ser Pro Ala Trp His Asp Glu Phe Val Thr Asp Val Cys Asn Gly Arg Lys Ile Glu Leu Ala Val Phe His Asp Ala Pro Ile Gly Tyr Asp Asp Phe Val Ala 90 Asn Cys Thr Ile Gln Phe Glu Glu Leu Leu Gln Asn Gly Ser Arg His Phe Glu Asp Trp Ile Asp Leu Glu Pro Glu Gly Arg Val Tyr Val Ile 120 Ile Asp Leu Ser Gly Ser Ser Gly Glu Ala Pro Lys Asp Asn Glu Glu 130 Arg Val Phe Arg Glu Arg Met Arg Pro Arg Lys Arg Gln Gly Ala Val Arg Arg Val His Gln Val Asn Gly His Lys Phe Met Ala Thr Tyr 170 Leu Arg Gln Pro Thr Tyr Cys Ser His Cys Arg Asp Phe Ile Trp Gly Val Ile Gly Lys Gln Gly Tyr Gln Cys Gln Val Cys Thr Cys Val Val 200 His Lys Arg Cys His Glu Leu Ile Ile Thr Lys Cys Ala Gly Leu Lys 210 Lys Gln Glu Thr Pro Asp Gln Val Gly Ser Gln Arg Phe Ser Val Asn 225 230 235 Met Pro His Lys Phe Gly Ile His Asn Tyr Lys Val Pro Thr Phe Cys

Asp	His	Cys	Gly 260	Ser	Leu	Leu	Trp	Gly 265	Leu	Leu	Arg	Gln	Gly 270	Leu	Gln
Cys	Lys	Val 275	Cys	Lys	Met	Asn	Val 280	His	Arg	Arg	Cys	Glu 285	Thr	Asn	Val
Ala	Pro 290	Asn	Cys	Gly	Val	Asp 295	Ala	Arg	Gly	Ile	Ala 300	Lys	Val	Leu	Ala
Asp 305	Leu	Gly	Val	Thr	Pro 310	Asp	Lys	Ile	Thr	Asn 315	Ser	Gly	Gln	Arg	Arg 320
Lys	Lys	Leu	Ile	Ala 325	Gly	Ala	Glu	Ser	Pro 330	Gln	Pro	Ala	Ser	Gly 335	Ser
Ser	Pro	Ser	Glu 340	Glu	Asp	Arg	Ser	Lys 345	Ser	Ala	Pro	Thr	Ser 350	Pro	Cys
Asp	Gln	Glu 355	Ile	Lys	Glu	Leu	Glu 360	Asn	Asn	Ile	Arg	Lys 365	Ala	Leu	Ser
Phe	Asp 370	Asn	Arg	Gly	Glu	Glu 375	His	Arg	Ala	Ala	Ser 380	Ser	Pro	Asp	Gly
Gln 385	Leu	Met	Ser	Pro	Gly 390	Glu	Asn	Gly	Glu	Val 395	Arg	Gln	Gly	Gln	Ala 400
Lys	Arg	Leu	Gly	Leu 405	Asp	Glu	Phe	Asn	Phe 410	Ile	Lys	Val	Leu	Gly 415	Lys
Gly	Ser	Phe	Gly 420	Lys	Val	Met	Leu	Ala 425	Glu	Leu	Lys	Gly	Lys 430	Asp	Glu
Val	Tyr	Ala 435	Val	Lys	Val	Leu	Lys 440	Lys	Asp	Val	Ile	Leu 445	Gln	Asp	Asp
Asp	Val 450	Asp	Cys	Thr	Met	Thr 455	Glu	Lys	Arg	Ile	Leu 460	Ala	Leu	Ala	Arg
Lys 465	His	Pro	Tyr	Leu	Thr 470	Gln	Leu	Tyr	Cys	Cys 475	Phe	Gln	Thr	Lys	Asp 480
Arg	Leu	Phe	Phe	Val 485	Met	Glu	Tyr	Val	Asn 490	Gly	Gly	Asp	Leu	Met 495	Phe
Gln	Ile	Gln	Arg 500	Ser	Arg	Lys	Phe	Asp 505	Glu	Pro	Arg	Ser	Arg 510	Phe	Tyr
Ala	Ala	Glu 515	Val	Thr	Ser	Ala	Leu 520	Met	Phe	Leu	His	Gln 525	His	Gly	Val
Ile	Tyr 530	Arg	Asp	Leu	Lys	Leu 535	Asp	Asn	Ile	Leu	Leu 540	Asp	Ala	Glu	Gly
His	Cys	Lys	Leu	Ala	Asp	Phe	Gly	Met	Cys	Lys	Glu	Gly	Ile	Leu	Asn

545	550	555	560
343	330	222	200

Gly Val Thr Thr Thr Phe Cys Gly Thr Pro Asp Tyr Ile Ala Pro
565 570 575

Glu Ile Leu Gln Glu Leu Glu Tyr Gly Pro Ser Val Asp Trp Trp Ala 580 585 590

Leu Gly Val Leu Met Tyr Glu Met Met Ala Gly Gln Pro Pro Phe Glu 595 600 605

Ala Asp Asn Glu Asp Asp Leu Phe Glu Ser Ile Leu His Asp Asp Val 610 615 620

Leu Tyr Pro Val Trp Leu Ser Lys Glu Ala Val Ser Ile Leu Lys Ala 625 630 635 640

Phe Met Thr Lys Asn Pro His Lys Arg Leu Gly Cys Val Ala Ser Gln 645 650 655

Asn Gly Glu Asp Ala Ile Lys Gln His Pro Phe Phe Lys Glu Ile Asp 660 665 670

Trp Val Leu Leu Glu Gln Lys Lys Ile Lys Pro Pro Phe Lys Pro Arg 675 680 685

Ile Lys Thr Lys Arg Asp Val Asn Asn Phe Asp Gln Asp Phe Thr Arg 690 695 700

Glu Glu Pro Val Leu Thr Leu Val Asp Glu Ala Ile Val Lys Gln Ile 705 710 715 720

Asn Gln Glu Glu Phe Lys Gly Phe Ser Tyr Phe Gly Glu Asp Leu Met 725 730 735

Pro

<210> 196

<211> 855

<212> PRT

<213> Homo sapiens

<400> 196

Met Ile Leu Ile Pro Arg Met Leu Leu Val Leu Phe Leu Leu Pro 1 5 10 15

Ile Leu Ser Ser Ala Lys Ala Gln Val Asn Pro Ala Ile Cys Arg Tyr
20 25 30

Pro Leu Gly Met Ser Gly Gly Gln Ile Pro Asp Glu Asp Ile Thr Ala
35 40 45

Ser Ser Gln Trp Ser Glu Ser Thr Ala Ala Lys Tyr Gly Arg Leu Asp 50 55 60

Ser 65	Glu	Glu	Gly	Asp	Gly 70	Ala	Trp	Cys	Pro	Glu 75	Ile	Pro	Val	Glu	Pro 80
Asp	Asp	Leu	Lys	Glu 85	Phe	Leu	Gln	Ile	Asp 90	Leu	His	Thr	Leu	His 95	Phe
Ile	Thr	Leu	Val 100	Gly	Thr	Gln	Gly	Arg 105	His	Ala	Gly	Gly	His 110	Gly	Ile
Glu	Phe	Ala 115	Pro	Met	Tyr	Lys	Ile 120	Asn	Tyr	Ser	Arg	Asp 125	Gly	Thr	Arg
Trp	Ile 130	Ser	Trp	Arg	Asn	Arg 135	His	Gly	Lys	Gln	Val 140	Leu	Asp	Gly	Asn
Ser 145	Asn	Pro	Tyr	Asp	Ile 150	Phe	Leu	Lys	Asp	Leu 155	Glu	Pro	Pro	Ile	Val 160
Ala	Arg	Phe	Val	Arg 165	Phe	Ile	Pro	Val	Thr 170	Asp	His	Ser	Met	Asn 175	Val
Cys	Met	Arg	Val 180	Glu	Leu	Tyr	Gly	Cys 185	Val	Trp	Leu	Asp	Gly 190	Leu	Val
Ser	Tyr	Asn 195	Ala	Pro	Ala	Gly	Gln 200	Gln	Phe	Val	Leu	Pro 205	Gly	Gly	Ser
Ile	Ile 210	Tyr	Leu	Asn	Asp	Ser 215	Val	Tyr	Asp	Gly	Ala 220	Val	Gly	Tyr	Ser
Met 225	Thr	Glu	Gly	Leu	Gly 230	Gln	Leu	Thr	Asp	Gly 235	Val	Ser	Gly	Leu	Asp 240
Asp	Phe	Thr	Gln	Thr 245	His	Glu	Tyr	His	Val 250	Trp	Pro	Gly	Tyr	Asp 255	Tyr
Val	Gly	Trp	Arg 260	Asn	Glu	Ser	Ala	Thr 265	Asn	Gly	Tyr	Ile	Glu 270	Ile	Met
Phe	Glu	Phe 275	Asp	Arg	Ile	Arg	Asn 280	Phe	Thr	Thr	Met	Lys 285	Val	His	Cys
Asn	Asn 290	Met	Phe	Ala	Lys	Gly 295	Val	Lys	Ile	Phe	Lys 300	Glu	Val	Gln	Cys
Tyr 305	Phe	Arg	Ser	Glu	Ala 310	Ser	Glu	Trp	Glu	Pro 315	Asn	Ala	Ile	Ser	Phe 320
Pro	Leu	Val	Leu	Asp 325	Asp	Val	Asn	Pro	Ser 330	Ala	Arg	Phe	Val	Thr 335	Val
Pro	Leu	His	His 340	Arg	Met	Ala	Ser	Ala 345	Ile	Lys	Cys	Gln	Tyr 350	His	Phe
Ala	Asp	Thr	Trp	Met	Met	Phe	Ser 360	Glu	Ile	Thr	Phe	Gln 365	Ser	Asp	Ala

			_			a	~ 1	31 -	T	D	ml	G	D	M	77-	D
AL		et 70	Tyr	Asn	Asn	ser	375	Ala	Leu	PIO	Thr	380	PIO	мес	Ala	Pro
Th 38		hr	Tyr	Asp	Pro	Met 390	Leu	Lys	Val	Asp	Asp 395	Ser	Asn	Thr	Arg	Ile 400
Le	u I	le	Gly	Cys	Leu 405	Val	Ala	Ile	Ile	Phe 410	Ile	Leu	Leu	Ala	Ile 415	Ile
Va	ıl I	le	Ile	Leu 420	Trp	Arg	Gln	Phe	Trp 425	Gln	Lys	Met	Leu	Glu 430	Lys	Ala
Se	er A:	rg	Arg 435	Met	Leu	Asp	Asp	Glu 440	Met	Thr	Val	Ser	Leu 445	Ser	Leu	Pro
Se		sp 50	Ser	Ser	Met	Phe	Asn 455	Asn	Asn	Arg	Ser	Ser 460	Ser	Pro	Ser	Glu
G1 46		ly	Ser	Asn	Ser	Thr 470	Tyr	Asp	Arg	Ile	Phe 475	Pro	Leu	Arg	Pro	Asp 480
Ту	r G	ln	Glu	Pro	Ser 485	Arg	Leu	Ile	Arg	Lys 490	Leu	Pro	Glu	Phe	Ala 495	Pro
Gl	y G	lu	Glu	Glu 500	Ser	Gly	Cys	Ser	Gly 505	Val	Val	Lys	Pro	Val 510	Gln	Pro
Se	er G	ly	Pro 515	Glu	Gly	Val	Pro	His 520	Tyr	Ala	Glu	Ala	Asp 525	Ile	Val	Asn
L€		ln 30	Gly	Val	Thr	Gly	Gly 535	Asn	Thr	Tyr	Ser	Val 540	Pro	Ala	Val	Thr
Ме 54		sp	Leu	Leu	Ser	Gly 550	Lys	Asp	Val	Ala	Val 555	Glu	Glu	Phe	Pro	Arg 560
Ly	s L	eu	Leu	Thr	Phe 565	Lys	Glu	Lys	Leu	Gly 570	Glu	Gly	Gln	Phe	Gly 575	Glu
Va	al H	is	Leu	Cys 580	Glu	Val	Glu	Gly	Met 585	Glu	Lys	Phe	Lys	Asp 590	Lys	Asp
Ph	ne A	la	Leu 595	Asp	Val	Ser	Ala	Asn 600	Gln	Pro	Val	Leu	Val 605	Ala	Val	Lys
M∈		eu 10	Arg	Ala	Asp	Ala	Asn 615	Lys	Asn	Ala	Arg	Asn 620	Asp	Phe	Leu	Lys
G1 62		le	Lys	Ile	Met	Ser 630	Arg	Leu	Lys	Asp	Pro 635	Asn	Ile	Ile	His	Leu 640
L€	eu S	er	Val	Cys	Ile 645	Thr	Asp	Asp	Pro	Leu 650	Cys	Met	Ile	Thr	Glu 655	Tyr
M∈	et G	lu	Asn	Gly 660	Asp	Leu	Asn	Gln	Phe 665	Leu	Ser	Arg	His	Glu 670	Pro	Pro

Asn Ser Ser Ser Asp Val Arg Thr Val Ser Tyr Thr Asn Leu Lys 675 680 685

Phe Met Ala Thr Gln Ile Ala Ser Gly Met Lys Tyr Leu Ser Ser Leu 690 695 700

Asn Phe Val His Arg Asp Leu Ala Thr Arg Asn Cys Leu Val Gly Lys
705 710 715 720

Asn Tyr Thr Ile Lys Ile Ala Asp Phe Gly Met Ser Arg Asn Leu Tyr
725 730 735

Ser Gly Asp Tyr Tyr Arg Ile Gln Gly Arg Ala Val Leu Pro Ile Arg
740 745 750

Trp Met Ser Trp Glu Ser Ile Leu Leu Gly Lys Phe Thr Thr Ala Ser 755 760 765

Asp Val Trp Ala Phe Gly Val Thr Leu Trp Glu Thr Phe Thr Phe Cys 770 775 780

Gln Glu Gln Pro Tyr Ser Gln Leu Ser Asp Glu Gln Val Ile Glu Asn 785 790 795 800

Thr Gly Glu Phe Phe Arg Asp Gln Gly Arg Gln Thr Tyr Leu Pro Gln 805 810 815

Pro Ala Ile Cys Pro Asp Ser Val Tyr Lys Leu Met Leu Ser Cys Trp 820 825 830

Arg Arg Asp Thr Lys Asn Arg Pro Ser Phe Gln Glu Ile His Leu Leu 835 840 845

Leu Leu Gln Gln Gly Asp Glu 850 855

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<211> 966

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<213> Homo sapiens

<400> 197

Met Ala Asn Phe Gln Glu His Leu Ser Cys Ser Ser Ser Pro His Leu 1 5 10 15

Pro Phe Ser Glu Ser Lys Thr Phe Asn Gly Leu Gln Asp Glu Leu Thr 20 25 30

Ala Met Gly Asn His Pro Ser Pro Lys Leu Leu Glu Asp Gln Glu 35 40 45

Lys Gly Met Val Arg Thr Glu Leu Ile Glu Ser Val His Ser Pro Val 50 55 60

Thr Thr Thr Val Leu Thr Ser Val Ser Glu Asp Ser Arg Asp Gln Phe 70 75 80

- Glu Asn Ser Val Leu Gln Leu Arg Glu His Asp Glu Ser Glu Thr Ala Val Ser Gln Gly Asn Ser Asn Thr Val Asp Gly Glu Ser Thr Ser Gly 105 Thr Glu Asp Ile Lys Ile Gln Phe Ser Arg Ser Gly Ser Gly Ser Gly 120 Gly Phe Leu Glu Gly Leu Phe Gly Cys Leu Arg Pro Val Trp Asn Ile Ile Gly Lys Ala Tyr Ser Thr Asp Tyr Lys Leu Gln Gln Gln Asp Thr 145 150 155 160 Trp Glu Val Pro Phe Glu Glu Ile Ser Glu Leu Gln Trp Leu Gly Ser 170 Gly Ala Gln Gly Ala Val Phe Leu Gly Lys Phe Arg Ala Glu Glu Val 185 Ala Ile Lys Lys Val Arg Glu Gln Asn Glu Thr Asp Ile Lys His Leu 200 Arg Lys Leu Lys His Pro Asn Ile Ile Ala Phe Lys Gly Val Cys Thr 215
- Gln Ala Pro Cys Tyr Cys Ile Ile Met Glu Tyr Cys Ala His Gly Gln 225 230 235 240
- Leu Tyr Glu Val Leu Arg Ala Gly Arg Lys Ile Thr Pro Arg Leu Leu 245 250 255
- Val Asp Trp Ser Thr Gly Ile Ala Ser Gly Met Asn Tyr Leu His Leu 260 265 270
- His Lys Ile Ile His Arg Asp Leu Lys Ser Pro Asn Val Leu Val Thr 275 280 285
- His Thr Asp Ala Val Lys Ile Ser Asp Phe Gly Thr Ser Lys Glu Leu 290 295 300
- Ser Asp Lys Ser Thr Lys Met Ser Phe Ala Gly Thr Val Ala Trp Met 305 310 315 320
- Ala Pro Glu Val Ile Arg Asn Glu Pro Val Ser Glu Lys Val Asp Ile 325 330 335
- Trp Ser Phe Gly Val Val Leu Trp Glu Leu Leu Thr Gly Glu Ile Pro 340 345 350
- Tyr Lys Asp Val Asp Ser Ser Ala Ile Ile Trp Gly Val Gly Ser Asn 355 360 365
- Ser Leu His Leu Pro Val Pro Ser Thr Cys Pro Asp Gly Phe Lys Ile 370 375 380

Leu 385	Met	Lys	Gln	Thr	Trp 390	Gln	Ser	Lys	Pro	Arg 395	Asn	Arg	Pro	Ser	Phe 400
Arg	Gln	Thr	Leu	Met 405	His	Leu	Asp	Ile	Ala 410	Ser	Ala	Asp	Val	Leu 415	Ala
Thr	Pro	Gln	Glu 420	Thr	Tyr	Phe	Lys	Ser 425	Gln	Ala	Glu	Trp	Arg 430	Glu	Glu
Val	Lys	Lys 435	His	Phe	Glu	Lys	Ile 440	Lys	Ser	Glu	Gly	Thr 445	Cys	Ile	His
Arg	Leu 450	Asp	Glu	Glu	Leu	Ile 455	Arg	Arg	Arg	Arg	Glu 460	Glu	Leu	Arg	His
Ala 465	Leu	Asp	Ile	Arg	Glu 470	His	Tyr	Glu	Arg	Lys 475	Leu	Glu	Arg	Ala	Asn 480
Asn	Leu	Tyr	Met	Glu 485	Leu	Ser	Ala	Ile	Met 490	Leu	Gln	Leu	Glu	Met 495	Arg
Glu	Lys	Glu	Leu 500	Ile	Lys	Arg	Glu	Gln 505	Ala	Val	Glu	Lys	Lys 510	Tyr	Pro
Gly	Thr	Tyr 515	Lys	Arg	His	Pro	Val 520	Arg	Pro	Ile	Ile	His 525	Pro	Asn	Ala
Met	Glu 530	Lys	Leu	Met	Lys	Arg 535	Lys	Gly	Val	Pro	His 540	Lys	Ser	Gly	Met
Gln 545	Thr	Lys	Arg	Pro	Asp 550	Leu	Leu	Arg	Ser	Glu 555	Gly	Ile	Pro	Thr	Thr 560
Glu	Val	Ala	Pro	Thr 565	Ala	Ser	Pro	Leu	Ser 570	Gly	Ser	Pro	Lys	Met 575	Ser
Thr	Ser	Ser	Ser 580	Lys	Ser	Arg	Tyr	Arg 585	Ser	Lys	Pro	Arg	His 590	Arg	Arg
Gly	Asn	Ser 595	Arg	Gly	Ser	His	Ser 600	Asp	Phe	Ala	Ala	Ile 605	Leu	Lys	Asn
Gln	Pro 610	Ala	Gln	Glu	Asn	Ser 615	Pro	His	Pro	Thr	Tyr 620	Leu	His	Gln	Ala
Gln 625	Ser	Gln	Tyr	Pro	Ser 630	Leu	His	His	His	Asn 635	Ser	Leu	Gln	Gln	Gln 640
Tyr	Gln	Gln	Pro	Pro 645	Pro	Ala	Met	Ser	.Gln 650	Ser	His	His	Pro	Arg 655	Leu
Asn	Met	His	Gly 660	Gln	Asp	Ile	Ala	Thr 665	Cys	Ala	Asn	Asn	Leu 670	Arg	Tyr
Phe	Gly	Pro 675	Ala	Ala	Ala	Leu	Arg 680	Ser	Pro	Leu	Ser	Asn 685	His	Ala	Gln

Arg Gln Leu Pro Gly Ser Ser Pro Asp Leu Ile Ser Thr Ala Met Ala Ala Asp Cys Trp Arg Ser Ser Glu Pro Asp Lys Gly Gln Ala Gly Pro 715 710 Trp Gly Cys Cys Gln Ala Asp Ala Tyr Asp Pro Cys Leu Gln Cys Arg 725 Pro Glu Gln Tyr Gly Ser Leu Asp Ile Pro Ser Ala Glu Pro Val Gly Arg Ser Pro Asp Leu Ser Lys Ser Pro Ala His Asn Pro Leu Leu Glu Asn Ala Gln Ser Ser Glu Lys Thr Glu Glu Asn Glu Phe Ser Gly Cys Arg Ser Glu Ser Ser Leu Gly Thr Ser His Leu Gly Thr Pro Pro Ala Leu Pro Arg Lys Thr Arg Pro Leu Gln Lys Ser Gly Asp Asp Ser Ser Glu Glu Glu Gly Glu Val Asp Ser Glu Val Glu Phe Pro Arg Arg 825 Gln Arg Pro His Arg Cys Ile Ser Ser Cys Gln Ser Tyr Ser Thr Phe Ser Ser Glu Asn Phe Ser Val Ser Asp Gly Glu Gly Asn Thr Ser 850 855 Asp His Ser Asn Ser Pro Asp Glu Leu Ala Asp Lys Leu Glu Asp Arg 870 875

Ile Asp Ile Ser Ser His Ser Asp Gly Leu Ser Asp Lys Glu Cys Ala
900 905 910

Leu Ala Glu Lys Leu Asp Asp Leu Leu Ser Gln Thr Pro Glu Ile Pro

Val Arg Arg Val Lys Thr Gln Met Ser Leu Gly Lys Leu Cys Val Glu 915 920 925

Glu Arg Gly Tyr Glu Asn Pro Met Gln Phe Glu Glu Ser Asp Cys Asp 930 935 940

Ser Ser Asp Gly Glu Cys Ser Asp Ala Thr Val Arg Thr Asn Lys His 945 950 955 960

Tyr Ser Ser Ala Thr Trp 965

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<212> PRT

<213> Homo sapiens

<400> 198

Arg Lys Glu Ala Val Leu Ser Ala Lys Met Lys His Pro Asn Ile Val 1 5 10 15

Ala Phe Lys Glu Ser Phe Glu Ala Glu Gly His Leu Tyr Ile Val Met 20 25 30

Glu Tyr Cys Asp Gly Gly Asp Leu Met Gln Lys Ile Lys Gln Gln Lys 35 40 45

Gly Lys Leu Phe Pro Glu Asp Met Ile Leu Asn Trp Phe Thr Gln Met 50 55 60

Cys Leu Gly Val Asn His Ile His Lys Lys Arg Val Leu His Arg Asp 70 75 80

Ile Lys Ser Lys Asn Ile Phe Leu Thr Gln Asn Gly Lys Val Lys Leu 85 90 95

Gly Asp Phe Gly Ser Ala Arg Leu Leu Ser Asn Pro Met Ala Phe Ala 100 105 110

Cys Thr Tyr Val Gly Thr Pro Tyr Tyr Val Pro Pro Glu Ile Trp Glu 115 120 125

Asn Leu Pro Tyr Asn Asn Lys Ser Asp Ile Trp Ser Leu Gly Cys Ile 130 135 140

Leu Tyr Glu Leu Cys Thr Leu Lys His Pro Phe Gln Ala Asn Ser Trp 145 150 155 160

Lys Asn Leu Ile Leu Lys Val Cys Gln Gly Cys Ile Ser Pro Leu Pro 165 170 175

Ser His Tyr Ser Tyr Glu Leu Gln Phe Leu Val Lys Gln Met Phe Lys 180 185 190

Arg Asn Pro Ser His Arg Pro Ser Ala Thr Thr Leu Leu Ser Arg Gly
195 200 205

Ile Val Ala Arg Leu Val Gln Lys Cys Leu Pro Pro Glu Ile Ile Met 210 215 220

Glu Tyr Gly Glu Glu Val Leu Glu Glu Ile Lys Asn Ser Lys His Asn 225 230 235 240

Thr Pro Arg Lys Lys Thr Asn Pro Ser Arg Ile Arg Ile Ala Leu Gly
245 250 255

Asn Glu Ala Ser Thr Val Gln Glu Glu Gln Asp Arg Lys Gly Ser 260 265 270

His Thr Asp Leu Glu Ser Ile Asn Glu Asn Leu Val Glu Ser Ala Leu

275 280 285

Arg Arg Val Asn Arg Glu Glu Lys Gly Asn Lys Ser Val His Leu Arg 300 295 Lys Ala Ser Ser Pro Asn Leu His Arg Arg Gln Trp Glu Lys Asn Val 315 310 Pro Asn Thr Ala Leu Thr Ala Leu Glu Asn Ala Ser Ile Leu Thr Ser 325 330 Ser Leu Thr Ala Glu Asp Asp Arg Gly Gly Ser Val Ile Lys Tyr Ser 350 340 345 Lys Asn Thr Thr Arg Lys Gln Trp Leu Lys Glu Thr Pro Asp Thr Leu 360 Leu Asn Ile Leu Lys Asn Ala Asp Leu Ser Leu Ala Phe Gln Thr Tyr 375 Thr Ile Tyr Arg Pro Gly Ser Glu Gly Phe Leu Lys Gly Pro Leu Ser 385 390 Glu Glu Thr Glu Ala Ser Asp Ser Val Asp Gly Gly His Asp Ser Val 410 Ile Leu Asp Pro Glu Arg Leu Glu Pro Gly Leu Asp Glu Glu Asp Thr Asp Phe Glu Glu Asp Asp Asn Pro Asp Trp Val Ser Glu Leu Lys Lys Arg Ala Gly Trp Gln Gly Leu Cys Asp Arg 455 <210> 199 <211> 1124 <212> PRT <213> Homo sapiens <400> 199 Met Ala Pro Pro Ser Glu Glu Thr Pro Leu Ile Pro Gln Arg Ser Cys 10 Ser Leu Leu Ser Thr Glu Ala Gly Ala Leu His Val Leu Leu Pro Ala 25 Arg Ala Pro Gly Pro Pro Gln Arg Leu Ser Phe Ser Phe Gly Asp His 35

Leu Ala Glu Asp Leu Cys Val Gln Ala Ala Lys Ala Ser Gly Ile Leu

Pro Val Tyr His Ser Leu Phe Ala Leu Ala Thr Glu Asp Leu Ser Cys

Trp	Phe	Pro	Pro	ser 85	HIS	116	Pne	ser	90	GIU	Asp	Ala	ser	95	GIN
Val	Leu	Leu	Tyr 100	Arg	Ile	Arg	Phe	Tyr 105	Phe	Pro	Asn	Trp	Phe 110	Gly	Leu
Glu	Lys	Cys 115	His	Arg	Phe	Gly	Leu 120	Arg	Lys	Asp	Leu	Ala 125	Ser	Ala	Ile
Leu	Asp 130	Leu	Pro	Val	Leu	Glu 135	His	Leu	Phe	Ala	Gln 140	His	Arg	Ser	Asp
Leu 145	Val	Ser	Gly	Arg	Leu 150	Pro	Val	Gly	Leu	Ser 155	Leu	Lys	Glu	Gln	Gly 160
Glu	Cys	Leu	Ser	Leu 165	Ala	Val	Leu	Asp	Leu 170	Ala	Arg	Met	Ala	Arg 175	Glu
Gln	Ala	Gln	Arg 180	Pro	Gly	Glu	Leu	Leu 185	Lys	Thr	Val	Ser	Tyr 190	Lys	Ala
Cys	Leu	Pro 195	Pro	Ser	Leu	Arg	Asp 200	Leu	Ile	Gln	Gly	Leu 205	Ser	Phe	Val
Thr	Arg 210	Arg	Ala	Ile	Arg	Arg 215	Thr	Val	Arg	Arg	Ala 220	Leu	Pro	Arg	Val
Ala 225	Ala	Cys	Gln	Ala	Asp 230	Arg	His	Ser	Leu	Met 235	Ala	Lys	Tyr	Ile	Met 240
Asp	Leu	Glu	Arg	Leu 245	Asp	Pro	Ala	Gly	Ala 250	Ala	Glu	Thr	Phe	His 255	Val
Gly	Leu	Pro	Gly 260	Ala	Leu	Gly	Gly	His 265	Asp	Gly	Leu	Gly	Leu 270	Leu	Arg
Val	Ala	Gly 275	Asp	Gly	Gly	Ile	Ala 280	Trp	Thr	Gln	Gly	Glu 285	Gln	Glu	Val
Leu	Gln 290	Pro	Phe	Cys	Asp	Phe 295	Pro	Glu	Ile	Val	Asp 300	Ile	Ser	Ile	Lys
Gln 305	Ala	Pro	Arg	Val	Gly 310	Pro	Ala	Gly	Glu	His 315	Arg	Leu	Val	Thr	Val 320
Thr	Arg	Thr	Asp	Asn 325	Gln	Ile	Leu	Glu	Ala 330	Glu	Phe	Pro	Gly	Leu 335	Pro
Glu	Ala	Leu	Ser 340	Phe	Val	Ala	Leu	Val [°] 345	Asp	Gly	Tyr	Phe	Arg 350	Leu	Thr
Thr	Asp	Ser 355	Gln	His	Phe	Phe	Cys 360	Lys	Glu	Val	Ala	Pro 365	Pro	Arg	Leu
Leu	Glu 370	Glu	Val	Ala	Glu	Gln 375	Суѕ	His	Gly	Pro	Ile 380	Thr	Leu	Asp	Phe

Ala 385	Ile	Asn	Lys	Leu	Lys 390	Thr	Gly	Gly	Ser	Arg 395	Pro	Gly	Ser	Tyr	Val 400
Leu	Arg	Arg	Ser	Pro 405	Gln	Asp	Phe	Asp	Ser 410	Phe	Leu	Leu	Thr	Val 415	Cys
Val	Gln	Asn	Pro 420	Leu	Gly	Pro	Asp	Tyr 425	Lys	Gly	Cys	Leu	Ile 430	Arg	Arg
Ser	Pro	Thr 435	Gly	Thr	Phe	Leu	Leu 440	Val	Gly	Leu	Ser	Arg 445	Pro	His	Ser
Ser	Leu 450	Arg	Glu	Leu	Leu	Ala 455	Thr	Cys	Trp	Asp	Gly 460	Gly	Leu	His	Val
Asp 465	Gly	Val	Ala	Val	Thr 470	Leu	Thr	Ser	Cys	Cys 475	Ile	Pro	Arg	Pro	Lys 480
Glu	Lys	Ser	Asn	Leu 485	Ile	Val	Val	Gln	Arg 490	Gly	His	Ser	Pro	Pro 495	Thr
Ser	Ser	Leu	Val 500	Gln	Pro	Gln	Ser	Gln 505	Tyr	Gln	Leu	Ser	Gln 510	Met	Thr
Phe	His	Lys 515	Ile	Pro	Ala	Asp	Ser 520	Leu	Glu	Trp	His	Glu 525	Asn	Leu	Gly
His	Gly 530	Ser	Phe	Thr	Lys	Ile 535	Tyr	Arg	Gly	Cys	Arg 540	His	Glu	Val	Val
Asp 545	Gly	Glu	Ala	Arg	Lys 550	Thr	Glu	Val	Leu	Leu 555	Lys	Val	Met	Asp	Ala 560
Lys	His	Lys	Asn	Cys 565	Met	Glu	Ser	Phe	Leu 570	Glu	Ala	Ala	Ser	Leu 575	Met
Ser	Gln	Val	Ser 580	Tyr	Arg	His	Leu	Val 585	Leu	Leu	His	Gly	Val 590	Cys	Met
Ala	Gly	Asp 595	Ser	Thr	Met	Val	Gln 600	Glu	Phe	Val	His	Leu 605	Gly	Ala	Ile
Asp	Met 610	Tyr	Leu	Arg	Lys	Arg 615	Gly	His	Leu	Val	Pro 620	Ala	Ser	Trp	Lys
Leu 625	Gln	Val	Val	Lys	Gln 630	Leu	Ala	Tyr	Ala	Leu 635	Asn	Tyr	Leu	Glu	Asp 640
Lys	Gly	Leu	Pro	His 645	Gly	Asn	Val	Ser	Ala 650	Arg	Lys	Val	Leu	Leu 655	Ala
Arg	Glu	Gly	Ala 660	Asp	Gly	Ser	Pro	Pro 665	Phe	Ile	Lys	Leu	Ser 670	Asp	Pro
Gly	Val	Ser 675	Pro	Ala	Val	Leu	Ser 680	Leu	Glu	Met	Leu	Thr 685	Asp	Arg	Ile

Pro	1rp 690	Val	Ala	Pro	GIU	695	Leu	Arg	GIU	Ala	700	THE	Leu	ser	Leu
Glu 705	Ala	Asp	Lys	Trp	Gly 710	Phe	Gly	Ala	Thr	Val 715	Trp	Glu	Val	Phe	Ser 720
Gly	Val	Thr	Met	Pro 725	Ile	Ser	Ala	Leu	Asp 730	Pro	Ala	Lys	Lys	Leu 735	Gln
Phe	Tyr	Glu	Asp 740	Arg	Gln	Gln	Leu	Pro 745	Ala	Pro	Lys	Trp	Thr 750	Glu	Leu
Ala	Leu	Leu 755	Ile	Gln	Gln	Cys	Met 760	Ala	Tyr	Glu	Pro	Val 765	Gln	Arg	Pro
Ser	Phe 770	Arg	Ala	Val	Ile	Arg 775	Asp	Leu	Asn	Ser	Leu 780	Ile	Ser	Ser	Asp
Tyr 785	Glu	Leu	Leu	Ser	Asp 790	Pro	Thr	Pro	Gly	Ala 795	Leu	Ala	Pro	Arg	Asp 800
Gly	Leu	Trp	Asn	Gly 805	Ala	Gln	Leu	Tyr	Ala 810	Cys	Gln	Asp	Pro	Thr 815	Ile
Phe	Glu	Glu	Arg 820	His	Leu	Lys	Tyr	Ile 825	Ser	Gln	Leu	Gly	Lys 830	Gly	Asn
Phe	Gly	Ser 835	Val	Glu	Leu	Cys	Arg 840	Tyr	Asp	Pro	Leu	Ala 845	His	Asn	Thr
Gly	Ala 850	Leu	Val	Ala	Val	Lys 855	Gln	Leu	Gln	His	Ser 860	Gly	Pro	Asp	Gln
Gln 865	Arg	Asp	Phe	Gln	Arg 870	Glu	Ile	Gln	Ile	Leu 875	Lys	Ala	Leu	His	Ser 880
Asp	Phe	Ile	Val	Lys 885	Tyr	Arg	Gly	Val	Ser 890	Tyr	Gly	Pro	Gly	Arg 895	Pro
Glu	Leu	Arg	Leu 900	Val	Met	Glu	Tyr	Leu 905	Pro	Ser	Gly	Cys	Leu 910	Arg	Asp
Phe	Leu	Gln 915	Arg	His	Arg	Ala	Arg 920	Leu	Asp ,	Ala	Ser	Arg 925	Leu	Leu	Leu
Tyr	Ser 930	Ser	Gln	Ile	Cys	Lys 935	Gly	Met	Glu	Tyr	Leu 940	Gly	Ser	Arg	Arg
Cys 945	Val	His	Arg	Asp	Leu 950	Ala	Ala	Arg	Asn	Ile 955	Leu	Val	Glu	Ser	Glu 960
Ala	His	Val	Lys	Ile 965	Ala	Asp	Phe	Gly	Leu 970	Ala	Lys	Leu	Leu	Pro 975	Leu
Asp	Lys	Asp	Tyr 980	Tyr	Val	Val	Arg	Glu 985	Pro	Gly	Gln	Ser	Pro 990	Ile	Phe

- Trp Tyr Ala Pro Glu Ser Leu Ser Asp Asn Ile Phe Ser Arg Gln Ser 995 1000 1005
- Asp Val Trp Ser Phe Gly Val Val Leu Tyr Glu Leu Phe Thr Tyr 1010 1015 1020
- Cys Asp Lys Ser Cys Ser Pro Ser Ala Glu Phe Leu Arg Met Met 1025 1030 1035
- Gly Cys Glu Arg Asp Val Pro Ala Leu Cys Arg Leu Leu Glu Leu 1040 1045 1050
- Leu Glu Glu Gly Gln Arg Leu Pro Ala Pro Pro Ala Cys Pro Ala 1055 1060 1065
- Glu Val His Glu Leu Met Lys Leu Cys Trp Ala Pro Ser Pro Gln 1070 1075 1080
- Asp Arg Pro Ser Phe Ser Ala Leu Gly Pro Gln Leu Asp Met Leu 1085 1090 1095
- Trp Ser Gly Ser Arg Gly Cys Glu Thr His Ala Phe Thr Ala His 1100 1105 1110
- Pro Glu Gly Lys His His Ser Leu Ser Phe Ser 1115 1120
- <210> 200
- <211> 505
- <212> PRT
- <213> Homo sapiens
- <400> 200
- Met Ala Glu Ser Ala Gly Ala Ser Ser Phe Phe Pro Leu Val Val Leu

 5 10 15
- Leu Leu Ala Gly Ser Gly Gly Ser Gly Pro Arg Gly Val Gln Ala Leu 20 25 30
- Leu Cys Ala Cys Thr Ser Cys Leu Gln Ala Asn Tyr Thr Cys Glu Thr 35 40 45
- Asp Gly Ala Cys Met Val Ser Ile Phe Asn Leu Asp Gly Met Glu His 50 55 60
- His Val Arg Thr Cys Ile Pro Lys Val Glu Leu Val Pro Ala Gly Lys 65 70 75 80
- Pro Phe Tyr Cys Leu Ser Ser Glu Asp Leu Arg Asn Thr His Cys Cys 85 90 95
- Tyr Thr Asp Tyr Cys Asn Arg Ile Asp Leu Arg Val Pro Ser Gly His
 100 105 110
- Leu Lys Glu Pro Glu His Pro Ser Met Trp Gly Pro Val Glu Leu Val 115 120 125

Gly	Ile 130	Ile	Ala	Gly	Pro	Val 135	Phe	Leu	Leu	Phe	Leu 140	Ile	Ile	Ile	Ile
Val 145	Phe	Leu	Val	Ile	Asn 150	Tyr	His	Gln	Arg	Val 155	Tyr	His	Asn	Arg	Gln 160
Arg	Leu	Asp	Met	Glu 165	Asp	Pro	Ser	Cys	Glu 170	Met	Cys	Leu	Ser	Lys 175	Asp
Lys	Thr	Leu	Gln 180	Asp	Leu	Val	Tyr	Asp 185	Leu	Ser	Thr	Ser	Gly 190	Ser	Gly
Ser	Gly	Leu 195	Pro	Leu	Phe	Val	Gln 200	Arg	Thr	Val	Ala	Arg 205	Thr	Ile	Val
Leu	Gln 210	Glu	Ile	Ile	Gly	Lys 215	Gly	Arg	Phe	Gly	Glu 220	Val	Trp	Arg	Gly
Arg 225	Trp	Arg	Gly	Gly	Asp 230	Val	Ala	Val	Lys	Ile 235	Phe	Ser	Ser	Arg	Glu 240
Glu	Arg	Ser	Trp	Phe 245	Arg	Glu	Ala	Glu	Ile 250	Tyr	Gln	Thr	Val	Met 255	Leu
Arg	His	Glu	Asn 260	Ile	Leu	Gly	Phe	Ile 265	Ala	Ala	Asp	Asn	Lys 270	Asp	Asn
Gly	Thr	Trp 275	Thr	Gln	Leu	Trp	Leu 280	Val	Ser	Asp	Tyr	His 285	Glu	His	Gly
Ser	Leu 290	Phe	Asp	Tyr	Leu	Asn 295	Arg	Tyr	Thr	Val	Thr 300	Ile	Glu	Gly.	Met
Ile 305	Lys	Leu	Ala	Leu	Ser 310	Ala	Ala	Ser	Gly	Leu 315	Ala	His	Leu	His	Met 320
Glu	Ile	Val	Gly	Thr 325	Gln	Gly	Lys	Pro	Gly 330	Ile	Ala	His	Arg	Asp 335	Leu
Lys	Ser	Lys	Asn 340	Ile	Leu	Val	Lys	Lys 345	Asn	Gly	Met	Cys	Ala 350	Ile	Ala
Asp	Leu	Gly 355	Leu	Ala	Val	Arg	His 360	Asp	Ala	Val	Thr	Asp 365	Thr	Ile	Asp
Ile	Ala 370	Pro	Asn	Gln	Arg	Val 375	Gly	Thr	Lys	Arg	Tyr 380	Met	Ala	Pro	Glu
Val 385	Leu	Asp	Glu	Thr	Ile 390	Asn	Met	Lys	His	Phe 395	Asp	Ser	Phe	Lys	Cys 400
Ala	Asp	Ile	Tyr	Ala 405	Leu	Gly	Leu	Val	Tyr 410	Trp	Glu	Ile	Ala	Arg 415	Arg
Cys	Asn	Ser	Gly 420	Gly	Val	His	Glu	Glu 425	Tyr	Gln	Leu	Pro	Tyr 430	Tyr	Asp

Leu Val Pro Ser Asp Pro Ser Ile Glu Glu Met Arg Lys Val Val Cys
435 440 445

Asp Gln Lys Leu Arg Pro Asn Ile Pro Asn Trp Trp Gln Ser Tyr Glu 450 455 460

Ala Leu Arg Val Met Gly Lys Met Met Arg Glu Cys Trp Tyr Ala Asn 465 470 475 480

Gly Ala Ala Arg Leu Thr Ala Leu Arg Ile Lys Lys Thr Leu Ser Gln 485 490 495

Leu Ser Val Gln Glu Asp Val Lys Ile 500 505

<210> 201

<211> 626

<212> PRT

<213> Homo sapiens

<400> 201

Met Asp Glu Gln Glu Ala Leu Asn Ser Ile Met Asn Asp Leu Val Ala 1 5 10 15

Leu Gln Met Asn Arg Arg His Arg Met Pro Gly Tyr Glu Thr Met Lys
20 25 30

Asn Lys Asp Thr Gly His Ser Asn Arg Gln Ser Asp Val Arg Ile Lys 35 40 45

Phe Glu His Asn Gly Glu Arg Arg Ile Ile Ala Phe Ser Arg Pro Val 50 55 60

Lys Tyr Glu Asp Val Glu His Lys Val Thr Thr Val Phe Gly Gln Pro 75 80

Leu Asp Leu His Tyr Met Asn Asn Glu Leu Ser Ile Leu Leu Lys Asn 85 90 95

Gln Asp Asp Leu Asp Lys Ala Ile Asp Ile Leu Asp Arg Ser Ser Ser 100 105 110

Met Lys Ser Leu Arg Ile Leu Leu Leu Ser Gln Asp Arg Asn His Asn 115 120 125

Ser Ser Ser Pro His Ser Glu Val Ser Arg Gln Val Arg Ile Lys Ala 130 135 140

Ser Gln Ser Ala Gly Asp Ile Asn Thr Ile Tyr Gln Pro Pro Glu Pro 145 150 155 160

Arg Ser Arg His Leu Ser Val Ser Ser Gln Asn Pro Gly Arg Ser Ser 165 170 175

Pro Pro Pro Gly Tyr Val Pro Glu Arg Gln Gln His Ile Ala Arg Gln

Gly Ser Tyr Thr Ser Ile Asn Ser Glu Gly Glu Phe Ile Pro Glu Thr 200 Ser Glu Gln Cys Met Leu Asp Pro Leu Ser Ser Ala Glu Asn Ser Leu 215 220 Ser Gly Ser Cys Gln Ser Leu Asp Arg Ser Ala Asp Ser Pro Ser Phe 230 235 Arg Lys Ser Arg Met Ser Arg Ala Gln Ser Phe Pro Asp Asn Arg Gln 245 Glu Tyr Ser Asp Arg Glu Thr Gln Leu Tyr Asp Lys Gly Val Lys Gly Gly Thr Tyr Pro Arg Arg Tyr His Val Ser Val His His Lys Asp Tyr 280 Ser Asp Gly Arg Arg Thr Phe Pro Arg Ile Arg Arg His Gln Gly Asn 290 295 Leu Phe Thr Leu Val Pro Ser Ser Arg Ser Leu Ser Thr Asn Gly Glu Asn Met Gly Leu Ala Val Gln Tyr Leu Asp Pro Arg Gly Arg Leu Arg 330 Ser Ala Asp Ser Glu Asn Ala Leu Ser Val Gln Glu Arg Asn Val Pro 345 Thr Lys Ser Pro Ser Ala Pro Ile Asn Trp Arg Arg Gly Lys Leu Leu 360 Gly Gln Gly Ala Phe Gly Arg Val Tyr Leu Cys Tyr Asp Val Asp Thr 370 Gly Arg Glu Leu Ala Ser Lys Gln Val Gln Phe Asp Pro Asp Ser Pro 390 Glu Thr Ser Lys Glu Val Ser Ala Leu Glu Cys Glu Ile Gln Leu Leu 410 Lys Asn Leu Gln His Glu Arg Ile Val Gln Tyr Tyr Gly Cys Leu Arg 420 Asp Arg Ala Glu Lys Thr Leu Thr Ile Phe Met Glu Tyr Met Pro Gly 440 Gly Ser Val Lys Asp Gln Leu Lys Ala Tyr Gly Ala Leu Thr Glu Ser 450 Val Thr Arg Lys Tyr Thr Arg Gln Ile Leu Glu Gly Met Ser Tyr Leu 470 465 His Ser Asn Met Ile Val His Arg Asp Ile Lys Gly Ala Asn Ile Leu Arg Asp Ser Ala Gly Asn Val Lys Leu Gly Asp Phe Gly Ala Ser Lys
500 505 510

Arg Leu Gln Thr Ile Cys Met Ser Gly Thr Gly Met Arg Ser Val Thr 515 520 525

Gly Thr Pro Tyr Trp Met Ser Pro Glu Val Ile Ser Gly Glu Gly Tyr 530 540

Gly Arg Lys Ala Asp Val Trp Ser Leu Gly Cys Thr Val Val Glu Met 545 550 555

Leu Thr Glu Lys Pro Pro Trp Ala Glu Tyr Glu Ala Met Ala Ala Ile 565 570 575

Phe Lys Ile Ala Thr Gln Pro Thr Asn Pro Gln Leu Pro Ser His Ile 580 585 590

Ser Glu His Gly Arg Asp Phe Leu Arg Arg Ile Phe Val Glu Ala Arg 595 600 605

Gln Arg Pro Ser Ala Glu Glu Leu Leu Thr His His Phe Ala Gln Leu 610 620

Met Tyr 625

<210> 202

<211> 626

<212> PRT

<213> Homo sapiens

<400> 202

Met Asp Glu Gln Glu Ala Leu Asn Ser Ile Met Asn Asp Leu Val Ala 1 5 10 15

Leu Gln Met Asn Arg Arg His Arg Met Pro Gly Tyr Glu Thr Met Lys
20 25 30

Asn Lys Asp Thr Gly His Ser Asn Arg Gln Ser Asp Val Arg Ile Lys 35 40 45

Phe Glu His Asn Gly Glu Arg Arg Ile Ile Ala Phe Ser Arg Pro Val 50 55 60

Lys Tyr Glu Asp Val Glu His Lys Val Thr Thr Val Phe Gly Gln Pro 65 70 75 80

Leu Asp Leu His Tyr Met Asn Asn Glu Leu Ser Ile Leu Leu Lys Asn 85 90 95

Gln Asp Asp Leu Asp Lys Ala Ile Asp Ile Leu Asp Arg Ser Ser Ser 100 105 110

Met	Lys	Ser 115	Leu	Arg	Ile	Leu	Leu 120	Leu	Ser	Gln	Asp	Arg 125	Asn	His	Asn	
	Ser 130	Ser	Pro	His	Ser	Glu 135	Val	Ser	Arg	Gln	Val 140	Arg	Ile	Lys	Ala	
Ser 145	Gln	Ser	Ala	Gly	Asp 150	Ile	Asn	Thr	Ile	Tyr 155	Gln	Pro	Pro	Glu	Pro 160	
Arg	Ser	Arg	His	Leu 165	Ser	Val	Ser	Ser	Gln 170	Asn	Pro	Gly	Arg	Ser 175	Ser	
Pro	Pro	Pro	Gly 180	Tyr	Val	Pro	Glu	Arg 185	Gln	Gln	His	Ile	Ala 190	Arg	Gln	
Gly	Ser	Tyr 195	Thr	Ser	Ile	Asn	Ser 200	Glu	Gly	Glu	Phe	Ile 205	Pro	Glu	Thr	
	Glu 210	Gln	Cys	Met	Leu	Asp 215	Pro	Leu	Ser	Ser	Ala 220	Glu	Asn	Ser	Leu	
Ser 225	Gly	Ser	Cys	Gln	Ser 230	Leu	Asp	Arg	Ser	Ala 235	Asp	Ser	Pro	Ser	Phe 240	
Arg	Lys	Ser	Arg	Met 245	Ser	Arg	Ala	Gln	Ser 250	Phe	Pro	Asp	Asn	Arg 255	Gln	
Glu	Tyr	Ser	Asp 260	Arg	Glu	Thr	Gln	Leu 265	Tyr	Asp	Lys	Gly	Val 270	Lys	Gly	
Gly	Thr	Tyr 275	Pro	Arg	Arg	Tyr	His 280	Val	Ser	Val	His	His 285	Lys	Asp	Tyr	
Ser	Asp 290	Gly	Arg	Arg	Thr	Phe 295	Pro	Arg	Ile	Arg	Arg 300	His	Gln	Gly	Asn	
Leu 305	Phe	Thr	Leu	Val	Pro 310	Ser	Ser	Arg	Ser	Leu 315	Ser	Thr	Asn	Gly	Glu 320	
Asn	Met	Gly	Leu	Ala 325	Val	Gln	Tyr	Leu	Asp 330	Pro	Arg	Gly	Arg	Leu 335	Arg	
Ser	Ala	Asp	Ser 340	Glu	Asn	Ala	Leu	Ser 345	Val	Gln	Glu	Arg	Asn 350	Val	Pro	
Thr	Lys	Ser 355	Pro	Ser	Ala	Pro	Ile 360	Asn	Trp	Arg	Arg	Gly 365	Lys	Leu	Leu	
Gly	Gln 370	Gly	Ala	Phe	Gly	Arg 375	Val	Tyr	Leu	Cys	Tyr 380	Asp	Val	Asp	Thr	
Gly 385	Arg	Glu	Leu	Ala	Ser 390	Lys	Gln	Val	Gln	Phe 395	Asp	Pro	Asp	Ser	Pro 400	
Glu	Thr	Ser	Lys	Glu 405	Val	Ser	Ala	Leu	Glu 410	Cys	Glu	Ile	Gln	Leu 415	Leu	

Lys Asn Leu Gln His Glu Arg Ile Val Gln Tyr Tyr Gly Cys Leu Arg 430 420 Asp Arg Ala Glu Lys Thr Leu Thr Ile Phe Met Glu Tyr Met Pro Gly 435 440 Gly Ser Val Lys Asp Gln Leu Lys Ala Tyr Gly Ala Leu Thr Glu Ser 455 Val Thr Arg Lys Tyr Thr Arg Gln Ile Leu Glu Gly Met Ser Tyr Leu 465 470 His Ser Asn Met Ile Val His Arg Asp Ile Lys Gly Ala Asn Ile Leu Arq Asp Ser Ala Gly Asn Val Lys Leu Gly Asp Phe Gly Ala Ser Lys Arg Leu Gln Thr Ile Cys Met Ser Gly Thr Gly Met Arg Ser Val Thr Gly Thr Pro Tyr Trp Met Ser Pro Glu Val Ile Ser Gly Glu Gly Tyr 535 Gly Arg Lys Ala Asp Val Trp Ser Leu Gly Cys Thr Val Val Glu Met 550 555 560 545 Leu Thr Glu Lys Pro Pro Trp Ala Glu Tyr Glu Ala Met Ala Ala Ile 570 Phe Lys Ile Ala Thr Gln Pro Thr Asn Pro Gln Leu Pro Ser His Ile 585 Ser Glu His Gly Arg Asp Phe Leu Arg Arg Ile Phe Val Glu Ala Arg 595 Gln Arg Pro Ser Ala Glu Glu Leu Leu Thr His His Phe Ala Gln Leu 615 620 Met Tyr 625 <210> 203 <211> 372 <212> PRT <213> Homo sapiens <400> 203 Met Ala Lys Gln Tyr Asp Ser Val Glu Cys Pro Phe Cys Asp Glu Val Ser Lys Tyr Glu Lys Leu Ala Lys Ile Gly Gln Gly Thr Phe Gly Glu Val Phe Lys Ala Arg His Arg Lys Thr Gly Gln Lys Val Ala Leu Lys

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Arg 65	Glu	Ile	Lys	Ile	Leu 70	Gln	Leu	Leu	Lys	His 75	Glu	Asn	Val	Val	Asn 80
Leu	Ile	Glu	Ile	Cys 85	Arg	Thr	Lys	Ala	Ser 90	Pro	Tyr	Asn	Arg	Cys 95	Lys
Gly	Ser	Ile	Tyr 100	Leu	Val	Phe	Asp	Phe 105	Cys	Glu	His	Asp	Leu 110	Ala	Gly
Leu	Leu	Ser 115	Asn	Val	Leu	Val	Lys 120	Phe	Thr	Leu	Ser	Glu 125	Ile	Lys	Arg
Val	Met 130	Gln	Met	Leu	Leu	Asn 135	Gly	Leu	Tyr	Tyr	Ile 140	His	Arg	Asn	Lys
Ile 145	Leu	His	Arg	Asp	Met 150	Lys	Ala	Ala	Asn	Val 155	Leu	Ile	Thr	Arg	Asp 160
Gly	Val	Leu	Lys	Leu 165	Ala	Asp	Phe	Gly	Leu 170	Ala	Arg	Ala	Phe	Ser 175	Leu
Ala	Lys	Asn	Ser 180	Gln	Pro	Asn	Arg	Tyr 185	Thr	Asn	Arg	Val	Val 190	Thr	Leu
Trp	Tyr	Arg 195	Pro	Pro	Glu	Leu	Leu 200	Leu	Gly	Glu	Arg	Asp 205	Tyr	Gly	Pro
Pro	Ile 210	Asp	Leu	Trp	Gly	Ala 215	Gly	Cys	Ile	Met	Ala 220	Glu	Met	Trp	Thr
Arg 225	Ser	Pro	Ile	Met	Gln 230	Gly	Asn	Thr	Glu	Gln 235	His	Gln	Leu	Ala	Leu 240
Ile	Ser	Gln	Leu	Cys 245	Gly	Ser	Ile	Thr	Pro 250	Glu	Val	Trp	Pro	Asn 255	Val
Asp	Asn	Tyr	Glu 260	Leu	Tyr	Glu	Lys	Leu 265	Glu	Leu	Val	Lys	Gly 270	Gln	Lys
Arg	Lys	Val 275	Lys	Asp	Arg	Leu	Lys 280	Ala	Tyr	Val	Arg	Asp 285	Pro	Tyr	Ala
Leu	Asp 290	Leu	Ile	Asp	Lys	Leu 295	Leu	Val	Leu	Asp	Pro 300	Ala	Gln	Arg	Ile
Asp 305	Ser	Asp	Asp	Ala	Leu 310	Asn	His	Asp	Phe	Phe 315	Trp	Ser	Asp	Pro	Met 320
Pro	Ser	Asp	Leu	Lys 325	Gly	Met	Leu	Ser	Thr 330	His	Leu	Thr	Ser	Met 335	Phe
Glu	Tyr	Leu	Ala 340	Pro	Pro	Arg	Arg	Lys 345	Gly	Ser	Gln	Ile	Thr 350	Gln	Gln

Ser Thr Asn Gln Ser Arg Asn Pro Ala Thr Thr Asn Gln Thr Glu Phe 355 360 365

Glu Arg Val Phe 370

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<213> Homo sapiens

<400> 204

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Tyr Gly Thr Val Tyr Lys Ala Arg Asp Pro His Ser Gly His Phe Val 20 25 30

Ala Leu Lys Ser Val Arg Val Pro Asn Gly Gly Gly Gly Gly Gly 35 40 45

Leu Pro Ile Ser Thr Val Arg Glu Val Ala Leu Leu Arg Arg Leu Glu 50 55 60

Ala Phe Glu His Pro Asn Val Val Arg Leu Met Asp Val Cys Ala Thr 65 70 75 80

Ser Arg Thr Asp Arg Glu Ile Lys Val Thr Leu Val Phe Glu His Val 85 90 95

Asp Gln Asp Leu Arg Thr Tyr Leu Asp Lys Ala Pro Pro Pro Gly Leu 100 105 110

Pro Ala Glu Thr Ile Lys Asp Leu Met Arg Gln Phe Leu Arg Gly Leu 115 120 125

Asp Phe Leu His Ala Asn Cys Ile Val His Arg Asp Leu Lys Pro Glu 130 135 140

Asn Ile Leu Val Thr Ser Gly Gly Thr Val Lys Leu Ala Asp Phe Gly 145 150 155 160

Leu Ala Arg Ile Tyr Ser Tyr Gln Met Ala Leu Thr Pro Val Val Val 165 170 175

Thr Leu Trp Tyr Arg Ala Pro Glu Val Leu Leu Gln Ser Thr Tyr Ala 180 185 190

Thr Pro Val Asp Met Trp Ser Val Gly Cys Ile Phe Ala Glu Met Phe 195 200 205

Arg Arg Lys Pro Leu Phe Cys Gly Asn Ser Glu Ala Asp Gln Leu Gly 210 215 220

Lys Ile Phe Asp Leu Ile Gly Leu Pro Pro Glu Asp Asp Trp Pro Arg

Asp Val Ser Leu Pro Arg Gly Ala Phe Pro Pro Arg Gly Pro Arg Pro 245 250 255

Val Gln Ser Val Val Pro Glu Met Glu Glu Ser Gly Ala Gln Leu Leu 260 265 270

Leu Glu Met Leu Thr Phe Asn Pro His Lys Arg Ile Ser Ala Phe Arg 275 280 285

Ala Leu Gln His Ser Tyr Leu His Lys Asp Glu Gly Asn Pro Glu 290 295 300

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<211> 303

<212> PRT

<213> Homo sapiens

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Tyr Gly Thr Val Tyr Lys Ala Arg Asp Pro His Ser Gly His Phe Val 20 25 30

Ala Leu Lys Ser Val Arg Val Pro Asn Gly Gly Gly Gly Gly Gly 35 40 45

Leu Pro Ile Ser Thr Val Arg Glu Val Ala Leu Leu Arg Arg Leu Glu 50 55 60

Ala Phe Glu His Pro Asn Val Val Arg Leu Met Asp Val Cys Ala Thr 65 70 75 80

Ser Arg Thr Asp Arg Glu Ile Lys Val Thr Leu Val Phe Glu His Val 85 90 95

Asp Gln Asp Leu Arg Thr Tyr Leu Asp Lys Ala Pro Pro Pro Gly Leu 100 105 110

Pro Ala Glu Thr Ile Lys Asp Leu Met Arg Gln Phe Leu Arg Gly Leu 115 120 125

Asp Phe Leu His Ala Asn Cys Ile Val His Arg Asp Leu Lys Pro Glu 130 135 140

Asn Ile Leu Val Thr Ser Gly Gly Thr Val Lys Leu Ala Asp Phe Gly 145 150 155 160

Leu Ala Arg Ile Tyr Ser Tyr Gln Met Ala Leu Thr Pro Val Val Val 165 170 175

Thr Leu Trp Tyr Arg Ala Pro Glu Val Leu Leu Gln Ser Thr Tyr Ala 180 185 190 Thr Pro Val Asp Met Trp Ser Val Gly Cys Ile Phe Ala Glu Met Phe Arg Arg Lys Pro Leu Phe Cys Gly Asn Ser Glu Ala Asp Gln Leu Gly Lys Ile Phe Asp Leu Ile Gly Leu Pro Pro Glu Asp Asp Trp Pro Arg 230 Asp Val Ser Leu Pro Arg Gly Ala Phe Pro Pro Arg Gly Pro Arg Pro Val Gln Ser Val Val Pro Glu Met Glu Glu Ser Gly Ala Gln Leu Leu 265 Leu Glu Met Leu Thr Phe Asn Pro His Lys Arg Ile Ser Ala Phe Arg 280 Ala Leu Gln His Ser Tyr Leu His Lys Asp Glu Gly Asn Pro Glu 290 295 300 <210> 206 <211> 590 <212> PRT <213> Homo sapiens <400> 206 Met Glu Leu Glu Asn Ile Val Ala Asn Thr Val Leu Leu Lys Ala Arg 5 Glu Gly Gly Gly Lys Arg Lys Gly Lys Ser Lys Lys Trp Lys Glu Ile Leu Lys Phe Pro His Ile Ser Gln Cys Glu Asp Leu Arg Arg Thr Ile Asp Arg Asp Tyr Cys Ser Leu Cys Asp Lys Gln Pro Ile Gly Arg Leu Leu Phe Arg Gln Phe Cys Glu Thr Arg Pro Gly Leu Glu Cys Tyr Ile Gln Phe Leu Asp Ser Val Ala Glu Tyr Glu Val Thr Pro Asp Glu 90 Lys Leu Gly Glu Lys Gly Lys Glu Ile Met Thr Lys Tyr Leu Thr Pro 100 Lys Ser Pro Val Phe Ile Ala Gln Val Gly Gln Asp Leu Val Ser Gln 120 Thr Glu Glu Lys Leu Gln Lys Pro Cys Lys Glu Leu Phe Ser Ala 130 135 140 Cys Ala Gln Ser Val His Glu Tyr Leu Arg Gly Glu Pro Phe His Glu

150

145

Tyr	Leu	Asp	Ser	Met 165	Phe	Phe	Asp	Arg	Phe 170	Leu	Gln	Trp	Lys	Trp 175	Leu
Glu	Arg	Gln	Pro 180	Val	Thr	Lys	Asn	Thr 185	Phe	Arg	Gln	Tyr	Arg 190	Val	Leu
Gly	Lys	Gly 195	Gly	Phe	Gly	Glu	Val 200	Cys	Ala	Cys	Gln	Val 205	Arg	Ala	Thr
Gly	Lys 210	Met	Tyr	Ala	Cys	Lys 215	Arg	Leu	Glu	Lys	Lys 220	Arg	Ile	Lys	Lys
Arg 225	Lys	Gly	Glu	Ser	Met 230	Ala	Leu	Asn	Glu	Lys 235	Gln	Ile	Leu	Glu	Lys 240
Val	Asn	Ser	Gln	Phe 245	Val	Val	Asn	Leu	Ala 250	Tyr	Ala	Tyr	Glu	Thr 255	Lys
Asp	Ala	Leu	Cys 260	Leu	Val	Leu	Thr	Ile 265	Met	Asn	Gly	Gly	Asp 270	Leu	Lys
Phe	His	Ile 275	Tyr	Asn	Met	Gly	Asn 280	Pro	Gly	Phe	Glu	Glu 285	Glu	Arg	Ala
Leu	Phe 290	Tyr	Ala	Ala	Glu	Ile 295	Leu	Cys	Gly	Leu	Glu 300	Asp	Leu	His	Arg
Glu 305	Asn	Thr	Val	Tyr	Arg 310	Asp	Leu	Lys	Pro	Glu 315	Asn	Ile	Leu	Leu	Asp 320
Asp	Tyr	Gly	His	Ile 325	Arg	Ile	Ser	Asp	Leu 330	Gly	Leu	Ala	Val	Lys 335	Ile
Pro	Glu	Gly	Asp 340	Leu	Ile	Arg	Gly	Arg 345	Val	Gly	Thr	Val	Gly 350	Tyr	Met
Ala	Pro	Glu 355	Val	Leu	Asn	Asn	Gln 360	Arg	Tyr	Gly	Leu	Ser 365	Pro	Asp	Tyr
Trp	Gly 370	Leu	Gly	Cys	Leu	Ile 375	Tyr	Glu	Met	Ile	Glu 380	Gly	Gln	Ser	Pro
Phe 385	Arg	Gly	Arg	Lys	Glu 390	Lys	Val	Lys	Arg	Glu 395	Glu	Val	Asp	Arg	Arg 400
Val	Leu	Glu	Thr	Glu 405	Glu	Val	Tyr	Ser	His 410	Lys	Phe	Ser	Glu	Glu 415	Ala
Lys	Ser	Ile	Cys 420	Lys	Met	Leu	Leu	Thr 425	Lys	Asp	Ala	Lys	Gln 430	Arg	Leu
Gly	Cys	Gln 435	Glu	Glu	Gly	Ala	Ala 440	Glu	Val	Lys	Arg	His 445	Pro	Phe	Phe
Arg	Asn 450	Met	Asn	Phe	Lys	Arg 455	Leu	Glu	Ala	Gly	Met 460	Leu	Asp	Pro	Pro

Phe Val Pro Asp Pro Arg Ala Val Tyr Cys Lys Asp Val Leu Asp Ile 470 Glu Gln Phe Ser Thr Val Lys Gly Val Asn Leu Asp His Thr Asp Asp 490 485 Asp Phe Tyr Ser Lys Phe Ser Thr Gly Ser Val Ser Ile Pro Trp Gln 505 Asn Glu Met Ile Glu Thr Glu Cys Phe Lys Glu Leu Asn Val Phe Gly 520 525 Pro Asn Gly Thr Leu Pro Pro Asp Leu Asn Arg Asn His Pro Pro Glu 535 Pro Pro Lys Lys Gly Leu Leu Gln Arg Leu Phe Lys Arg Gln His Gln 550 555 Asn Asn Ser Lys Ser Ser Pro Ser Ser Lys Thr Ser Phe Asn His His 570 Ile Asn Ser Asn His Val Ser Ser Asn Ser Thr Gly Ser Ser 207 <210> <211> 590 <212> PRT <213> Homo sapiens <400> 207 Met Glu Leu Glu Asn Ile Val Ala Asn Thr Val Leu Leu Lys Ala Arg Glu Gly Gly Gly Lys Arg Lys Gly Lys Ser Lys Lys Trp Lys Glu Ile Leu Lys Phe Pro His Ile Ser Gln Cys Glu Asp Leu Arg Arg Thr Ile Asp Arg Asp Tyr Cys Ser Leu Cys Asp Lys Gln Pro Ile Gly Arg 55 Leu Leu Phe Arg Gln Phe Cys Glu Thr Arg Pro Gly Leu Glu Cys Tyr 70 65 Ile Gln Phe Leu Asp Ser Val Ala Glu Tyr Glu Val Thr Pro Asp Glu Lys Leu Gly Glu Lys Gly Lys Glu Ile Met Thr Lys Tyr Leu Thr Pro 100 Lys Ser Pro Val Phe Ile Ala Gln Val Gly Gln Asp Leu Val Ser Gln 115 120 Thr Glu Glu Lys Leu Gln Lys Pro Cys Lys Glu Leu Phe Ser Ala 130

Cys Ala Gln Ser Val His Glu Tyr Leu Arg Gly Glu Pro Phe His Glu 150 155 Tyr Leu Asp Ser Met Phe Phe Asp Arg Phe Leu Gln Trp Lys Trp Leu 170 Glu Arg Gln Pro Val Thr Lys Asn Thr Phe Arg Gln Tyr Arg Val Leu 185 Gly Lys Gly Gly Phe Gly Glu Val Cys Ala Cys Gln Val Arg Ala Thr 195 Gly Lys Met Tyr Ala Cys Lys Arg Leu Glu Lys Lys Arg Ile Lys Lys Arg Lys Gly Glu Ser Met Ala Leu Asn Glu Lys Gln Ile Leu Glu Lys 230 235 Val Asn Ser Gln Phe Val Val Asn Leu Ala Tyr Ala Tyr Glu Thr Lys 245 Asp Ala Leu Cys Leu Val Leu Thr Ile Met Asn Gly Gly Asp Leu Lys 265 Phe His Ile Tyr Asn Met Gly Asn Pro Gly Phe Glu Glu Glu Arg Ala 280 Leu Phe Tyr Ala Ala Glu Ile Leu Cys Gly Leu Glu Asp Leu His Arg Glu Asn Thr Val Tyr Arg Asp Leu Lys Pro Glu Asn Ile Leu Leu Asp 310 315 Asp Tyr Gly His Ile Arg Ile Ser Asp Leu Gly Leu Ala Val Lys Ile 325 Pro Glu Gly Asp Leu Ile Arg Gly Arg Val Gly Thr Val Gly Tyr Met 340 Ala Pro Glu Val Leu Asn Asn Gln Arg Tyr Gly Leu Ser Pro Asp Tyr Trp Gly Leu Gly Cys Leu Ile Tyr Glu Met Ile Glu Gly Gln Ser Pro 375 370 Phe Arg Gly Arg Lys Glu Lys Val Lys Arg Glu Glu Val Asp Arg Arg 390 395 Val Leu Glu Thr Glu Glu Val Tyr Ser His Lys Phe Ser Glu Glu Ala Lys Ser Ile Cys Lys Met Leu Leu Thr Lys Asp Ala Lys Gln Arg Leu Gly Cys Gln Glu Glu Gly Ala Ala Glu Val Lys Arg His Pro Phe Phe Arq Asn Met Asn Phe Lys Arg Leu Glu Ala Gly Met Leu Asp Pro Pro 455 Phe Val Pro Asp Pro Arg Ala Val Tyr Cys Lys Asp Val Leu Asp Ile 470 475 465 Glu Gln Phe Ser Thr Val Lys Gly Val Asn Leu Asp His Thr Asp Asp 490 Asp Phe Tyr Ser Lys Phe Ser Thr Gly Ser Val Ser Ile Pro Trp Gln 505 500 Asn Glu Met Ile Glu Thr Glu Cys Phe Lys Glu Leu Asn Val Phe Gly 520 Pro Asn Gly Thr Leu Pro Pro Asp Leu Asn Arg Asn His Pro Pro Glu 535 540 Pro Pro Lys Lys Gly Leu Leu Gln Arg Leu Phe Lys Arg Gln His Gln 545 Asn Asn Ser Lys Ser Ser Pro Ser Ser Lys Thr Ser Phe Asn His His 565 570 Ile Asn Ser Asn His Val Ser Ser Asn Ser Thr Gly Ser Ser <210> 208 <211> 590 <212> PRT <213> Homo sapiens <400> 208 Met Glu Leu Glu Asn Ile Val Ala Asn Thr Val Leu Leu Lys Ala Arg Glu Gly Gly Gly Lys Arg Lys Gly Lys Ser Lys Lys Trp Lys Glu 30 25 Ile Leu Lys Phe Pro His Ile Ser Gln Cys Glu Asp Leu Arg Arg Thr 40 . Ile Asp Arg Asp Tyr Cys Ser Leu Cys Asp Lys Gln Pro Ile Gly Arg 55 Leu Leu Phe Arg Gln Phe Cys Glu Thr Arg Pro Gly Leu Glu Cys Tyr 65 Ile Gln Phe Leu Asp Ser Val Ala Glu Tyr Glu Val Thr Pro Asp Glu

Lys Leu Gly Glu Lys Gly Lys Glu Ile Met Thr Lys Tyr Leu Thr Pro 100 105 110

Lys Ser Pro 115	Val Phe	Ile Ala	Gln 120	Val	Gly	Gln	Asp	Leu 125	Val	Ser	Gln
Thr Glu Glu 130	Lys Leu	Leu Gln 135	_	Pro	Cys	Lys	Glu 140	Leu	Phe	Ser	Ala
Cys Ala Gln 145	Ser Val	His Glu 150	Tyr	Leu	Arg	Gly 155	Glu	Pro	Phe	His	Glu 160
Tyr Leu Asp	Ser Met 165	Phe Phe	Asp	Arg	Phe 170	Leu	Gln	Trp	Lys	Trp 175	Leu
Glu Arg Gln	Pro Val 180	Thr Lys	Asn	Thr 185	Phe	Arg	Gln	Tyr	Arg 190	Val	Leu
Gly Lys Gly 195	Gly Phe	Gly Glu	Val 200	Cys	Ala	Cys	Gln	Val 205	Arg	Ala	Thr
Gly Lys Met 210	Tyr Ala	Cys Lys 215	_	Leu	Glu	Lys	Lys 220	Arg	Ile	Lys	Lys
Arg Lys Gly 225	Glu Ser	Met Ala 230	Leu	Asn	Glu	Lys 235	Gln	Ile	Leu	Glu	Lys 240
Val Asn Ser	Gln Phe 245	Val Val	Asn	Leu	Ala 250	Tyr	Ala	Tyr	Glu	Thr 255	Lys
Asp Ala Leu	Cys Leu 260	Val Leu	Thr	Ile 265	Met	Asn	Gly	Gly	Asp 270	Leu	Lys
Phe His Ile 275	Tyr Asn	Met Gly	280	Pro	Gly	Phe	Glu	Glu 285	Glu	Arg	Ala
Leu Phe Tyr 290	Ala Ala	Glu Ile 295		Cys	Gly	Leu	Glu 300	Asp	Leu	His	Arg
Glu Asn Thr 305	Val Tyr	Arg Asp 310	Leu	Lys	Pro	Glu 315	Asn	Ile	Leu	Leu	Asp 320
Asp Tyr Gly	His Ile 325	Arg Ile	Ser	Asp	Leu 330	Gly	Leu	Ala	Val	Lys 335	Ile
Pro Glu Gly	Asp Leu 340	Ile Arg	Gly	Arg 345	Val	Gly	Thr	Val	Gly 350	Tyr	Met
Ala Pro Glu 355	Val Leu	Asn Asr	360	Arg	Tyr	Gly	Leu	Ser 365	Pro	Asp	Tyr
Trp Gly Leu 370	Gly Cys	Leu Ile 375	_	Glu	Met	Ile	Glu 380	Gly	Gln	Ser	Pro
Phe Arg Gly 385	Arg Lys	Glu Lys 390	val	Lys	Arg	Glu 395	Glu	Val	Asp	Arg	Arg 400
Val Leu Glu	Thr Glu 405		Tyr	Ser	His 410	Lys	Phe	Ser	Glu	Glu 415	Ala

Lys Ser Ile Cys Lys Met Leu Leu Thr Lys Asp Ala Lys Gln Arg Leu Gly Cys Gln Glu Glu Gly Ala Ala Glu Val Lys Arg His Pro Phe Phe Arg Asn Met Asn Phe Lys Arg Leu Glu Ala Gly Met Leu Asp Pro Pro Phe Val Pro Asp Pro Arg Ala Val Tyr Cys Lys Asp Val Leu Asp Ile Glu Gln Phe Ser Thr Val Lys Gly Val Asn Leu Asp His Thr Asp Asp Asp Phe Tyr Ser Lys Phe Ser Thr Gly Ser Val Ser Ile Pro Trp Gln 505 Asn Glu Met Ile Glu Thr Glu Cys Phe Lys Glu Leu Asn Val Phe Gly 515 520 Pro Asn Gly Thr Leu Pro Pro Asp Leu Asn Arg Asn His Pro Pro Glu 535 Pro Pro Lys Lys Gly Leu Leu Gln Arg Leu Phe Lys Arg Gln His Gln 550 545 560 Asn Asn Ser Lys Ser Ser Pro Ser Ser Lys Thr Ser Phe Asn His His Ile Asn Ser Asn His Val Ser Ser Asn Ser Thr Gly Ser Ser <210> 209 <211> 676 <212> PRT <213> Homo sapiens <400> 209 Met Ala Pro Phe Leu Arg Ile Ala Phe Asn Ser Tyr Glu Leu Gly Ser Leu Gln Ala Glu Asp Glu Ala Asn Gln Pro Phe Cys Ala Val Lys Met Lys Glu Ala Leu Ser Thr Glu Arg Gly Lys Thr Leu Val Gln Lys Lys 35 Pro Thr Met Tyr Pro Glu Trp Lys Ser Thr Phe Asp Ala His Ile Tyr Glu Gly Arg Val Ile Gln Ile Val Leu Met Arg Ala Ala Glu Glu Pro 70 75 Val Ser Glu Val Thr Val Gly Val Ser Val Leu Ala Glu Arg Cys Lys

90

Lys	Asn	Asn	Gly 100	Lys	Ala	Glu	Phe	Trp 105	Leu	Asp	Leu	Gln	Pro 110	Gln	Ala
Lys	Val	Leu 115	Met	Ser	Val	Gln	Tyr 120	Phe	Leu	Glu	Asp	Val 125	Asp	Cys	Lys
Gln	Ser 130	Met	Arg	Ser	Glu	Asp 135	Glu	Ala	Lys	Phe	Pro 140	Thr	Met	Asn	Arg
Arg 145	Gly	Ala	Ile	Lys	Gln 150	Ala	Lys	Ile	His	Tyr 155	Ile	Lys	Asn	His	Glu 160
Phe	Ile	Ala	Thr	Phe 165	Phe	Gly	Gln	Pro	Thr 170	Phe	Cys	Ser	Val	Cys 175	Lys
Asp	Phe	Val	Trp 180	Gly	Leu	Asn	Lys	Gln 185	Gly	Tyr	Lys	Cys	Arg 190	Gln	Cys
Asn	Ala	Ala 195	Ile	His	Lys	Lys	Cys 200	Ile	Asp	Lys	Ile	Ile 205	Gly	Arg	Cys
Thr	Gly 210	Thr	Ala	Ala	Asn	Ser 215	Arg	Asp	Thr	Ile	Phe 220	Gln	Lys	Glu	Arg
Phe 225	Asn	Ile	Asp	Met	Pro 230	His	Arg	Phe	Lys	Val 235	His	Asn	Tyr	Met	Ser 240
			-	245		-	_		250					Val 255	
	_		260	_		_	-	265					270	Lys	
		275					280	-				285		Leu	
	290					295					300			Asp	
305					310					315				Lys	320
_				325	_				330					Gly 335	
	_		340					345					350	Phe	
_		355	-	-	_		360					365		Glu	
-	370					375					380			Asp	
Val 385	Leu	Ile	Asp	Asp	Asp 390	Val	Glu	Cys	Thr	Met 395	Val	Glu	Lys	Arg	Val 400

Leu Thr Leu Ala Ala Glu Asn Pro Phe Leu Thr His Leu Ile Cys Thr 410 405 Phe Gln Thr Lys Asp His Leu Phe Phe Val Met Glu Phe Leu Asn Gly 425 420 Gly Asp Leu Met Tyr His Ile Gln Asp Lys Gly Arg Phe Glu Leu Tyr Arg Ala Thr Phe Tyr Ala Ala Glu Ile Met Cys Gly Leu Gln Phe Leu His Ser Lys Gly Ile Ile Tyr Arg Asp Leu Lys Leu Asp Asn Val Leu 475 Leu Asp Arg Asp Gly His Ile Lys Ile Ala Asp Phe Gly Met Cys Lys 485 490 Glu Asn Ile Phe Gly Glu Ser Arg Ala Ser Thr Phe Cys Gly Thr Pro Asp Tyr Ile Ala Pro Glu Ile Leu Gln Gly Leu Lys Tyr Thr Phe Ser Val Asp Trp Trp Ser Phe Gly Val Leu Leu Tyr Glu Met Leu Ile Gly 535 Gln Ser Pro Phe His Gly Asp Asp Glu Asp Glu Leu Phe Glu Ser Ile 555 Arg Val Asp Thr Pro His Tyr Pro Arg Trp Ile Thr Lys Glu Ser Lys 570 565 Asp Ile Leu Glu Lys Leu Phe Glu Arg Glu Pro Thr Lys Arg Leu Gly 585 Met Thr Gly Asn Ile Lys Ile His Pro Phe Phe Lys Thr Ile Asn Trp 595 Thr Leu Leu Glu Lys Arg Arg Leu Glu Pro Pro Phe Arg Pro Lys Val 615 Lys Ser Pro Arg Asp Tyr Ser Asn Phe Asp Gln Glu Phe Leu Asn Glu 630 635 Lys Ala Arg Leu Ser Tyr Ser Asp Lys Asn Leu Ile Asp Ser Met Asp Gln Ser Ala Phe Ala Gly Phe Ser Phe Val Asn Pro Lys Phe Glu His

665

670

Leu Leu Glu Asp 675

<210> 210 <211> 406 <212> PRT

<213> Homo sapiens

<400> 210

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Ala Lys Glu Phe Tyr Gln Lys Tyr Asp Pro Lys Asp Val Ile Gly Arg
20 25 30

Gly Val Ser Ser Val Val Arg Arg Cys Val His Arg Ala Thr Gly His
35 40 45

Glu Phe Ala Val Lys Ile Met Glu Val Thr Ala Glu Arg Leu Ser Pro 50 60

Glu Gln Leu Glu Glu Val Arg Glu Ala Thr Arg Arg Glu Thr His Ile 65 70 75 80

Leu Arg Gln Val Ala Gly His Pro His Ile Ile Thr Leu Ile Asp Ser 85 90 95

Tyr Glu Ser Ser Ser Phe Met Phe Leu Val Phe Asp Leu Met Arg Lys
100 105 110

Gly Glu Leu Phe Asp Tyr Leu Thr Glu Lys Val Ala Leu Ser Glu Lys 115 120 125

Glu Thr Arg Ser Ile Met Arg Ser Leu Leu Glu Ala Val Ser Phe Leu 130 135 140

His Ala Asn Asn Ile Val His Arg Asp Leu Lys Pro Glu Asn Ile Leu 145 150 155 160

Leu Asp Asp Asn Met Gln Ile Arg Leu Ser Asp Phe Gly Phe Ser Cys 165 170 175

His Leu Glu Pro Gly Glu Lys Leu Arg Glu Leu Cys Gly Thr Pro Gly 180 185 190

Tyr Leu Ala Pro Glu Ile Leu Lys Cys Ser Met Asp Glu Thr His Pro 195 200 205

Gly Tyr Gly Lys Glu Val Asp Leu Trp Ala Cys Gly Val Ile Leu Phe 210 215 220

Thr Leu Leu Ala Gly Ser Pro Pro Phe Trp His Arg Arg Gln Ile Leu 225 230 235 240

Met Leu Arg Met Ile Met Glu Gly Gln Tyr Gln Phe Ser Ser Pro Glu 245 250 255

Trp Asp Asp Arg Ser Ser Thr Val Lys Asp Leu Ile Ser Arg Leu Leu 260 265 270

Gln Val Asp Pro Glu Ala Arg Leu Thr Ala Glu Gln Ala Leu Gln His

285 275 280 Pro Phe Phe Glu Arg Cys Glu Gly Ser Gln Pro Trp Asn Leu Thr Pro 300 295 Arg Gln Arg Phe Arg Val Ala Val Trp Thr Val Leu Ala Ala Gly Arg 310 315 Val Ala Leu Ser Thr His Arg Val Arg Pro Leu Thr Lys Asn Ala Leu 330 Leu Arg Asp Pro Tyr Ala Leu Arg Ser Val Arg His Leu Ile Asp Asn 340 Cys Ala Phe Arg Leu Tyr Gly His Trp Val Lys Lys Gly Glu Gln Gln Asn Arg Ala Ala Leu Phe Gln His Arg Pro Pro Gly Pro Phe Pro Ile 375 380 Met Gly Pro Glu Glu Glu Gly Asp Ser Ala Ala Ile Thr Glu Asp Glu 395 385 400 Ala Val Leu Val Leu Gly 405 <210> 211 <211> 1142 <212> PRT <213> Homo sapiens <400> 211 Met Ala Phe Cys Ala Lys Met Arg Ser Ser Lys Lys Thr Glu Val Asn Leu Glu Ala Pro Glu Pro Gly Val Glu Val Ile Phe Tyr Leu Ser Asp Arg Glu Pro Leu Arg Leu Gly Ser Gly Glu Tyr Thr Ala Glu Glu Leu 40 Cys Ile Arg Ala Ala Gln Ala Cys Arg Ile Ser Pro Leu Cys His Asn Leu Phe Ala Leu Tyr Asp Glu Asn Thr Lys Leu Trp Tyr Ala Pro Asn Arg Thr Ile Thr Val Asp Asp Lys Met Ser Leu Arg Leu His Tyr Arg

Met Arg Phe Tyr Phe Thr Asn Trp His Gly Thr Asn Asp Asn Glu Gln

Ser Val Trp Arg His Ser Pro Lys Lys Gln Lys Asn Gly Tyr Glu Lys

120

Lys Lys Ile 130	Pro Asp	Ala Thr		Leu	Leu	Asp	Ala 140	Ser	Ser	Leu	Glu
Tyr Leu Phe 145	Ala Gln	Gly Gln 150	Tyr	Asp	Leu	Val 155	Lys	Cys	Leu	Ala	Pro 160
Ile Arg Asp	Pro Lys 165	Thr Glu	Gln	Asp	Gly 170	His	Asp	Ile	Glu	Asn 175	Glu
Cys Leu Gly	Met Ala 180	Val Leu	Ala	Ile 185	Ser	His	Tyr	Ala	Met 190	Met	Lys
Lys Met Gln 195	Leu Pro	Glu Leu	Pro 200	Lys	Asp	Ile	Ser	Tyr 205	Lys	Arg	Tyr
Ile Pro Glu 210	Thr Leu	Asn Lys 215		Ile	Arg	Gln	Arg 220	Asn	Leu	Leu	Thr
Arg Met Arg 225	Ile Asn	Asn Val 230	Phe	Lys	Asp	Phe 235	Leu	Lys	Glu	Phe	Asn 240
Asn Lys Thr	Ile Cys 245	Asp Ser	Ser	Val	Ser 250	Thr	His	Asp	Leu	Lys 255	Val
Lys Tyr Leu	Ala Thr 260	Leu Glu	Thr	Leu 265	Thr	Lys	His	Tyr	Gly 270	Ala	Glu
ile Phe Glu 275	Thr Ser	Met Leu	Leu 280	Ile	Ser	Ser	Glu	Asn 285	Glu	Met	Asn
Trp Phe His 290	Ser Asn	Asp Gly 295	_	Asn	Val	Leu	Tyr 300	Tyr	Glu	Val	Met
Val Thr Gly 305	Asn Leu	Gly Ile 310	Gln	Trp	Arg	His 315	Lys	Pro	Asn	Val	Val 320
Ser Val Glu	Lys Glu 325	Lys Asr	Lys	Leu	Lys 330	Arg	Lys	Lys	Leu	Glu 335	Asn
Lys Asp Lys	Lys Asp 340	Glu Glu	Lys	Asn 345	Lys	Ile	Arg	Glu	Glu 350	Trp	Asn
Asn Phe Ser 355	Phe Phe	Pro Glu	Ile 360	Thr	His	Ile	Val	Ile 365	Lys	Glu	Ser
Val Val Ser 370	Ile Asn	Lys Glr 375	_	Asn	Lys	Lys	Met 380	Glu	Leu	Lys	Leu
Ser Ser His 385	Glu Glu	Ala Leu 390	Ser	Phe	Val	Ser 395	Leu	Val	Asp	Gly	Tyr 400
Phe Arg Leu	Thr Ala 405	Asp Ala	His	His	Tyr 410	Leu	Cys	Thr	Asp	Val 415	Ala
Pro Pro Leu	Ile Val 420	His Asr	lle	Gln 425	Asn	Gly	Cys	His	Gly 430	Pro	Ile

Cys	Tnr	435	Tyr	Ala	iie	ASII	LуS 440	ьeu	Arg	GIII	GIU	445	ser	GIU	GIU
Gly	Met 450	Tyr	Val	Leu	Arg	Trp 455	Ser	Cys	Thr	Asp	Phe 460	Asp	Asn	Ile	Leu
Met 465	Thr	Val	Thr	Cys	Phe 470	Glu	Lys	Ser	Glu	Gln 475	Val	Gln	Gly	Ala	Gln 480
Lys	Gln	Phe	Lys	Asn 485	Phe	Gln	Ile	Glu	Val 490	Gln	Lys	Gly	Arg	Tyr 495	Ser
Leu	His	Gly	Ser 500	Asp	Arg	Ser	Phe	Pro 505	Ser	Leu	Gly	Asp	Leu 510	Met	Ser
His	Leu	Lys 515	Lys	Gln	Ile	Leu	Arg 520	Thr	Asp	Asn	Ile	Ser 525	Phe	Met	Leu
Lys	Arg 530	Cys	Cys	Gln	Pro	Lys 535	Pro	Arg	Glu	Ile	Ser 540	Asn	Leu	Leu	Val
Ala 545	Thr	Lys	Lys	Ala	Gln 550	Glu	Trp	Gln	Pro	Val 555	Tyr	Pro	Met	Ser	Gln 560
Leu	Ser	Phe	Asp	Arg 565	Ile	Leu	Lys	Lys	Asp 570	Leu	Val	Gln	Gly	Glu 575	His
Leu	Gly	Arg	Gly 580	Thr	Arg	Thr	His	Ile 585	Tyr	Ser	Gly	Thr	Leu 590	Met	Asp
Tyr	Lys	Asp 595	Asp	Glu	Gly	Thr	Ser 600	Glu	Glu	Lys	Lys	Ile 605	Lys	Val	Ile
Leu	Lys 610	Val	Leu	Asp	Pro	Ser 615	His	Arg	Asp	Ile	Ser 620	Leu	Ala	Phe	Phe
Glu 625	Ala	Ala	Ser	Met	Met 630	Arg	Gln	Val	Ser	His 635	Lys	His	Ile	Val	Tyr 640
Leu	Tyr	Gly	Val	Cys 645	Val	Arg	Asp	Val	Glu 650	Asn	Ile	Met	Val	Glu 655	Glu
Phe	Val	Glu	Gly 660	Gly	Pro	Leu	Asp	Leu 665	Phe	Met	His	Arg	Lys 670	Ser	Asp
Val	Leu	Thr 675	Thr	Pro	Trp	Lys	Phe 680	Lys	Val	Ala	Lys	Gln 685	Leu	Ala	Ser
Ala	Leu 690	Ser	Tyr	Leu	Glu	Asp 695	Lys	Asp	Leu	Val	His 700	Gly	Asn	Val	Cys
Thr 705	Lys	Asn	Leu	Leu	Leu 710	Ala	Arg	Glu	Gly	Ile 715	Asp	Ser	Glu	Cys	Gly 720
Pro	Phe	Ile	Lys	Leu 725	Ser	Asp	Pro	Gly	Ile 730	Pro	Ile	Thr	Val	Leu 735	Ser

- Arg Gln Glu Cys Ile Glu Arg Ile Pro Trp Ile Ala Pro Glu Cys Val 740 745 750
- Glu Asp Ser Lys Asn Leu Ser Val Ala Ala Asp Lys Trp Ser Phe Gly 755 760 765
- Thr Thr Leu Trp Glu Ile Cys Tyr Asn Gly Glu Ile Pro Leu Lys Asp 770 775 780
- Lys Thr Leu Ile Glu Lys Glu Arg Phe Tyr Glu Ser Arg Cys Arg Pro
 785 790 795 800
- Val Thr Pro Ser Cys Lys Glu Leu Ala Asp Leu Met Thr Arg Cys Met 805 810 815
- Asn Tyr Asp Pro Asn Gln Arg Pro Phe Phe Arg Ala Ile Met Arg Asp 820 825 830
- Ile Asn Lys Leu Glu Glu Gln Asn Pro Asp Ile Val Ser Arg Lys Lys 835 840 845
- Asn Gln Pro Thr Glu Val Asp Pro Thr His Phe Glu Lys Arg Phe Leu 850 855 860
- Lys Arg Ile Arg Asp Leu Gly Glu Gly His Phe Gly Lys Val Glu Leu 865 870 875 880
- Cys Arg Tyr Asp Pro Glu Asp Asn Thr Gly Glu Gln Val Ala Val Lys 885 890 895
- Ser Leu Lys Pro Glu Ser Gly Gly Asn His Ile Ala Asp Leu Lys Lys 900 905 910
- Glu Ile Glu Ile Leu Arg Asn Leu Tyr His Glu Asn Ile Val Lys Tyr 915 920 925
- Lys Gly Ile Cys Thr Glu Asp Gly Gly Asn Gly Ile Lys Leu Ile Met 930 935 940
- Glu Phe Leu Pro Ser Gly Ser Leu Lys Glu Tyr Leu Pro Lys Asn Lys 945 950 955 960
- Asn Lys Ile Asn Leu Lys Gln Gln Leu Lys Tyr Ala Val Gln Ile Cys 965 970 975
- Lys Gly Met Asp Tyr Leu Gly Ser Arg Gln Tyr Val His Arg Asp Leu 980 985 990
- Ala Ala Arg Asn Val Leu Val Glu Ser Glu His Gln Val Lys Ile Gly
 995 1000 1005
- Asp Phe Gly Leu Thr Lys Ala Ile Glu Thr Asp Lys Glu Tyr Tyr 1010 1015 1020
- Thr Val Lys Asp Asp Arg Asp Ser Pro Val Phe Trp Tyr Ala Pro 1025 1030 1035

- Glu Cys Leu Met Gln Ser Lys Phe Tyr Ile Ala Ser Asp Val Trp 1040 1045 1050
- Ser Phe Gly Val Thr Leu His Glu Leu Leu Thr Tyr Cys Asp Ser 1055 1060 1065
- Asp Ser Ser Pro Met Ala Leu Phe Leu Lys Met Ile Gly Pro Thr 1070 1075 1080
- His Gly Gln Met Thr Val Thr Arg Leu Val Asn Thr Leu Lys Glu 1085 1090 1095
- Gly Lys Arg Leu Pro Cys Pro Pro Asn Cys Pro Asp Glu Val Tyr 1100 1105 1110
- Gln Leu Met Arg Lys Cys Trp Glu Phe Gln Pro Ser Asn Arg Thr 1115 1120 1125
- Ser Phe Gln Asn Leu Ile Glu Gly Phe Glu Ala Leu Leu Lys 1130 1135 1140
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- <400> 212
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- Glu Arg Asp Gly Ser Leu Asn Gln Ser Ser Gly Tyr Arg Tyr Gly Thr
 20 25 30
- Asp Pro Thr Pro Gln His Tyr Pro Ser Phe Gly Val Thr Ser Ile Pro 35 40 45
- Asn Tyr Asn Asn Phe His Ala Ala Gly Gly Gln Gly Leu Thr Val Phe 50 55 60
- Gly Gly Val Asn Ser Ser Ser His Thr Gly Thr Leu Arg Thr Arg Gly 65 70 75 80
- Gly Thr Gly Val Thr Leu Phe Val Ala Leu Tyr Asp Tyr Glu Ala Arg 85 90 95
- Thr Glu Asp Asp Leu Ser Phe His Lys Gly Glu Lys Phe Gln Ile Leu 100 105 110
- Asn Ser Ser Glu Gly Asp Trp Trp Glu Ala Arg Ser Leu Thr Thr Gly 115 120 125
- Glu Thr Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Val Asp Ser Ile 130 135 140
- Gln Ala Glu Glu Trp Tyr Phe Gly Lys Leu Gly Arg Lys Asp Ala Glu 145 150 155 160

Arg	GIII	ьеu	Leu	165	PHE	GIY	ASII	PIO	170	GIY	1111	FILE	цец	175	Arg
Glu	Ser	Glu	Thr 180	Thr	Lys	Gly	Ser	Tyr 185	Ser	Leu	Ser	Ile	Arg 190	Asp	Trp
Asp	Asp	Met 195	Lys	Gly	Asp	His	Val 200	Lys	His	Tyr	Lys	Ile 205	Arg	Lys	Leu
Asp	Asn 210	Gly	Gly	Tyr	Tyr	Ile 215	Thr	Thr	Arg	Ala	Gln 220	Phe	Glu	Thr	Leu
Gln 225	Gln	Leu	Val	Gln	His 230	Tyr	Ser	Glu	Arg	Ala 235	Ala	Gly	Leu	Cys	Cys 240
Arg	Leu	Val	Val	Pro 245	Cys	His	Lys	Gly	Met 250	Pro	Arg	Leu	Thr	Asp 255	Leu
Ser	Val	Lys	Thr 260	Lys	Asp	Val	Trp	Glu 265	Ile	Pro	Arg	Glu	Ser 270	Leu	Gln
Leu	Ile	Lys 275	Arg	Leu	Gly	Asn	Gly 280	Gln	Phe	Gly	Glu	Val 285	Trp	Met	Gly
Thr	Trp 290	Asn	Gly	Asn	Thr	Lys 295	Val	Ala	Ile	Lys	Thr 300	Leu	Lys	Pro	Gly
Thr 305	Met	Ser	Pro	Glu	Ser 310	Phe	Leu	Glu	Glu	Ala 315	Gln	Ile	Met	Lys	Lys 320
Leu	Lys	His	Asp	Lys 325	Leu	Val	Gln	Leu	Tyr 330	Ala	Val	Val	Ser	Glu 335	Glu
Pro	Ile	Tyr	Ile 340	Val	Thr	Glu	Tyr	Met 345	Asn	Lys	Gly	Ser	Leu 350	Leu	Asp
Phe	Leu	Lys 355	Asp	Gly	Glu	Gly	Arg 360	Ala	Leu	Lys	Leu	Pro 365	Asn	Leu	Val
Asp	Met 370	Ala	Ala	Gln	Val	Ala 375	Ala	Gly	Met	Ala	Tyr 380	Ile	Glu	Arg	Met
Asn 385	Tyr	Ile	His	Arg	Asp 390	Leu	Arg	Ser	Ala	Asn 395	Ile	Leu	Val	Gly	Asn 400
Gly	Leu	Ile	Cys	Lys 405	Ile	Ala	Asp	Phe	Gly 410	Leu	Ala	Arg	Leu	Ile 415	Glu
Asp	Asn	Glu	Tyr 420	Thr	Ala	Arg	Gln	Gly 425	Ala	Lys	Phe	Pro	Ile 430	Lys	Trp
Thr	Ala	Pro 435	Glu	Arg	Ala	Leu	Tyr 440	Gly	Arg	Phe	Thr	Ile 445	Lys	Ser	Asp
Val	Trp 450	Ser	Phe	Gly	Ile	Leu 455	Leu	Thr	Glu	Leu	Val 460	Thr	Lys	Gly	Arg

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Val Pro Tyr Pro Gly Met Asn Asn Arg Glu Val Leu Glu Gln Val Glu 465 470 475 Arg Gly Tyr Arg Met Pro Cys Pro Gln Asp Cys Pro Ile Ser Leu His 490 Glu Leu Met Ile His Cys Trp Lys Lys Asp Pro Glu Glu Arg Pro Thr 500 Phe Glu Tyr Leu Gln Ser Phe Leu Glu Asp Tyr Phe Thr Ala Thr Glu 520 Pro Gln Tyr Gln Pro Gly Glu Asn Leu <210> 213 <211> 537 <212> PRT <213> Homo sapiens <400> 213 Met Gly Cys Val Gln Cys Lys Asp Lys Glu Ala Thr Lys Leu Thr Glu Glu Arg Asp Gly Ser Leu Asn Gln Ser Ser Gly Tyr Arg Tyr Gly Thr 20 30 Asp Pro Thr Pro Gln His Tyr Pro Ser Phe Gly Val Thr Ser Ile Pro Asn Tyr Asn Asn Phe His Ala Ala Gly Gly Gln Gly Leu Thr Val Phe Gly Gly Val Asn Ser Ser Ser His Thr Gly Thr Leu Arg Thr Arg Gly 65 Gly Thr Gly Val Thr Leu Phe Val Ala Leu Tyr Asp Tyr Glu Ala Arg Thr Glu Asp Asp Leu Ser Phe His Lys Gly Glu Lys Phe Gln Ile Leu 100 Asn Ser Ser Glu Gly Asp Trp Trp Glu Ala Arg Ser Leu Thr Thr Gly 120 Glu Thr Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Val Asp Ser Ile Gln Ala Glu Glu Trp Tyr Phe Gly Lys Leu Gly Arg Lys Asp Ala Glu 145 Arg Gln Leu Leu Ser Phe Gly Asn Pro Arg Gly Thr Phe Leu Ile Arg 165 170

Glu Ser Glu Thr Thr Lys Gly Ser Tyr Ser Leu Ser Ile Arg Asp Trp

Asp	Asp	Met 195	Lys	Gly	Asp	His	Val 200	Lys	His	Tyr	Lys	Ile 205	Arg	Lys	Leu
Asp	Asn 210	Gly	Gly	Tyr	Tyr	Ile 215	Thr	Thr	Arg	Ala	Gln 220	Phe	Glu	Thr	Leu
Gln 225	Gln	Leu	Val	Gln	His 230	Tyr	Ser	Glu	Arg	Ala 235	Ala	Gly	Leu	Cys	Cys 240
Arg	Leu	Val	Val	Pro 245	Cys	His	Lys	Gly	Met 250	Pro	Arg	Leu	Thr	Asp 255	Leu
Ser	Val	Lys	Thr 260	Lys	Asp	Val	Trp	Glu 265	Ile	Pro	Arg	Glu	Ser 270	Leu	Gln
Leu	Ile	Lys 275	Arg	Leu	Gly	Asn	Gly 280	Gln	Phe	Gly	Glu	Val 285	Trp	Met	Gly
Thr	Trp 290	Asn	Gly	Asn	Thr	Lys 295	Val	Ala	Ile	Lys	Thr 300	Leu	Lys	Pro	Gly
Thr 305	Met	Ser	Pro	Glu	Ser 310	Phe	Leu	Glu	Glu	Ala 315	Gln	Ile	Met	Lys	Lys 320
Leu	Lys	His	Asp	Lys 325	Leu	Val	Gln	Leu	Tyr 330	Ala	Val	Val	Ser	Glu 335	Glu
Pro	Ile	Tyr	Ile 340	Val	Thr	Glu	Tyr	Met 345	Asn	Lys	Gly	Ser	Leu 350	Leu	Asp
Phe	Leu	Lys 355	Asp	Gly	Glu	Gly	Arg 360	Ala	Leu	Lys	Leu	Pro 365	Asn	Leu	Val
Asp	Met 370	Ala	Ala	Gln	Val	Ala 375	Ala	Gly	Met	Ala	Tyr 380	Ile	Glu	Arg	Met
Asn 385	Tyr	Ile	His	Arg	Asp 390	Leu	Arg	Ser	Ala	Asn 395	Ile	Leu	Val	Gly	Asn 400
Gly	Leu	Ile	Cys	Lys 405	Ile	Ala	Asp	Phe	Gly 410	Leu	Ala	Arg	Leu	Ile 415	Glu
Asp	Asn	Glu	Tyr 420	Thr	Ala	Arg	Gln	Gly 425	Ala	Lys	Phe	Pro	Ile 430	Lys	Trp
Thr	Ala	Pro 435	Glu	Arg	Ala	Leu	Tyr 440	Gly	Arg	Phe	Thr	Ile 445	Lys	Ser	Asp
Val	Trp 450	Ser	Phe	Gly	Ile	Leu 455	Leu	Thr	Glu	Leu	Val 460	Thr	Lys	Gly	Arg
Val 465	Pro	Tyr	Pro	Gly	Met 470	Asn	Asn	Arg	Glu	Val 475	Leu	Glu	Gln	Val	Glu 480
Arg	Gly	Tyr	Arg	Met	Pro	Cys	Pro	Gln	Asp	Cys	Pro	Ile	Ser	Leu	His

Glu Leu Met Ile His Cys Trp Lys Lys Asp Pro Glu Glu Arg Pro Thr 500 505 510

Phe Glu Tyr Leu Gln Ser Phe Leu Glu Asp Tyr Phe Thr Ala Thr Glu 515 520 525

Pro Gln Tyr Gln Pro Gly Glu Asn Leu 530 535

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Met Ser Ala Ala Val Thr Ala Gly Lys Leu Ala Arg Ala Pro Ala Asp 1 5 10 15

Pro Gly Lys Ala Gly Val Pro Gly Val Ala Pro Gly Ala Pro Ala 20 25 30

Ala Ala Pro Pro Ala Lys Glu Ile Pro Glu Val Leu Val Asp Pro Arg 35 40 45

Ser Arg Arg Tyr Val Arg Gly Arg Phe Leu Gly Lys Gly Gly Phe 50 55 60

Ala Lys Cys Phe Glu Ile Ser Asp Val Asp Thr Lys Glu Val Phe Ala 70 75 80

Gly Lys Ile Val Pro Lys Ser Leu Leu Leu Lys Pro His Gln Arg Glu 85 90 95

Lys Met Ser Met Glu Ile Ser Ile His Arg Ser Leu Ala His Gln His
100 105 110

Val Val Gly Phe His Gly Phe Phe Glu Asp Asn Asp Phe Val Phe Val
115 120 125

Val Leu Glu Leu Cys Arg Arg Ser Leu Leu Glu Leu His Lys Arg 130 135 140

Arg Lys Ala Leu Thr Glu Pro Glu Ala Arg Tyr Tyr Leu Arg Gln Ile 145 150 155 160

Val Leu Gly Cys Gln Tyr Leu His Arg Asn Arg Val Ile His Arg Asp 165 170 175

Leu Lys Leu Gly Asn Leu Phe Leu Asn Glu Asp Leu Glu Val Lys Ile 180 185 190

Gly Asp Phe Gly Leu Ala Thr Lys Val Glu Tyr Asp Gly Glu Arg Lys 195 200 205

Lys	Thr 210	Leu	Cys	Gly	Thr	Pro 215	Asn	Tyr	Ile	Ala	Pro 220	Glu	Val	Leu	Ser			
Lys 225	Lys	Gly	His	Ser	Phe 230	Glu	Val	Asp	Val	Trp 235	Ser	Ile	Gly	Cys	Ile 240			
Met	Tyr	Thr	Leu	Leu 245	Val	Gly	Lys	Pro	Pro 250	Phe	Glu	Thr	Ser	Cys 255	Leu			
Lys	Glu	Thr	Tyr 260	Leu	Arg	Ile	Lys	Lys 265	Asn	Glu	Tyr	Ser	Ile 270	Pro	Lys			
His	Ile	Asn 275	Pro	Val	Ala	Ala	Ser 280	Leu	Ile	Gln	Lys	Met 285	Leu	Gln	Thr			
Asp	Pro 290	Thr	Ala	Arg	Pro	Thr 295	Ile	Asn	Glu	Leu	Leu 300	Gly	Asp	Glu	Phe			
Phe 305	Thr	Ser	Gly	Tyr	Ile 310	Pro	Ala	Arg	Leu	Pro 315	Ile	Thr	Cys	Leu	Thr 320			
Ile	Pro	Pro	Arg	Phe 325	Ser	Ile	Ala	Pro	Ser 330	Ser	Leu	Asp	Pro	Ser 335	Asn			
Arg	Lys	Pro	Leu 340	Thr	Val	Leu	Asn	Lys 345	Gly	Leu	Glu	Asn	Pro 350	Leu	Pro			
Glu	Arg	Pro 355	Arg	Glu	Lys	Glu	Glu 360	Pro	Val	Val	Arg	Glu 365	Thr	Gly	Glu			
Val	Val 370	Asp	Cys	His	Leu	Ser 375	Asp	Met	Leu	Gln	Gln 380	Leu	His	Ser	Val			
Asn 385	Ala	Ser	Lys	Pro	Ser 390	Glu	Arg	Gly	Leu	Val 395	Arg	Gln	Glu	Glu	Ala 400			
Glu	Asp	Pro	Ala	Cys 405	Ile	Pro	Ile	Phe	Trp 410	Val	Ser	Lys	Trp	Val 415	Asp		•	
Tyr	Ser	Asp	Lys 420	Tyr	Gly	Leu	Gly	Tyr 425	Gln	Leu	Cys	Asp	Asn 430	Ser	Val			
Gly	Val	Leu 435	Phe	Asn	Asp	Ser	Thr 440	Arg	Leu	Ile	Leu	Tyr 445	Asn	Asp	Gly			
Asp	Ser 450	Leu	Gln	Tyr	Ile	Glu 455	Arg	Asp	Gly	Thr	Glu 460	Ser	Tyr	Leu	Thr			•
Val 465	Ser	Ser	His	Pro	Asn 470	Ser	Leu	Met	Lys	Lys 475	Ile	Thr	Leu	Leu	Lys 480			
Tyr	Phe	Arg	Asn	Tyr 485	Met	Ser	Glu	His	Leu 490	Leu	Lys	Ala	Gly	Gly 495	Asn			
Ile	Thr	Pro	Arg 500	Gln	Gly	Asp	Glu	Leu 505	Ala	Arg	Leu	Pro	Tyr 510	Leu	Arg			

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Thr Trp Phe Arg Thr Arg Ser Ala Ile Ile Leu His Leu Ser Asn Gly 515 520 Ser Val Gln Ile Asn Phe Phe Gln Asp His Thr Lys Leu Ile Leu Cys 535 Pro Leu Met Ala Ala Val Thr Tyr Ile Asp Glu Lys Arg Asp Phe Arg 555 550 Thr Tyr Arg Leu Ser Leu Leu Glu Glu Tyr Gly Cys Cys Lys Glu Leu 570 Ala Ser Arg Leu Arg Tyr Ala Arg Thr Met Val Asp Lys Leu Leu Ser Ser Arg Ser Ala Ser Asn Arg Leu Lys Ala Ser 600 <210> 215 <211> 416 <212> PRT <213> Homo sapiens <400> 215 Met Glu Leu Arg Val Gly Asn Lys Tyr Arg Leu Gly Arg Lys Ile Gly Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Ala Asn Ile Ala Ser Gly Glu Glu Val Ala Ile Lys Leu Glu Cys Val Lys Thr Lys His Pro Gln 40 Leu His Ile Glu Ser Lys Phe Tyr Lys Met Met Gln Gly Gly Val Gly Ile Pro Ser Ile Lys Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met 70 Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys Ser Arg Lys Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met 105 Ile Ser Arg Ile Glu Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp 115 Val Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu

Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg

Thr His Gln His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr

150

Ala Arg Tyr Ala Ser Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg 185 Arg Asp Asp Leu Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu 200 Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala Ala Thr Lys Arg Gln Lys Tyr Glu Arg Ile Ser Glu Lys Lys Met Ser Thr Pro Ile Glu Val Leu 235 Cys Lys Gly Tyr Pro Ser Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp Asp Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe His Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu Lys Phe Gly Ala Ala Arg Asn Pro Glu Asp Val Asp Arg Glu Arg Arg Glu His Glu Arg Glu Glu Arg Met Gly Gln Leu 310 Arg Gly Ser Ala Thr Arg Ala Leu Pro Pro Gly Pro Pro Thr Gly Ala 330 Thr Ala Asn Arg Leu Arg Ser Ala Ala Glu Pro Val Ala Ser Thr Pro 345 340 Ala Ser Arg Ile Gln Pro Ala Gly Asn Thr Ser Pro Arg Ala Ile Ser Arg Val Asp Arg Glu Arg Lys Val Ser Met Arg Leu His Arg Gly Ala 370 Pro Ala Asn Val Ser Ser Ser Asp Leu Thr Gly Arg Gln Glu Val Ser 390 385 Arg Ile Pro Ala Ser Gln Thr Ser Val Pro Phe Asp His Leu Gly Lys <210> 216 <211> 416 <212> PRT <213> Homo sapiens <400> 216

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Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Ala Asn Ile Ala Ser Gly

Glu	Glu	Val 35	Ala	Ile	Lys	Leu	Glu 40	Cys	Val	Lys	Thr	Lys 45	His	Pro	Glr
Leu	His 50	Ile	Glu	Ser	Lys	Phe 55	Tyr	Lys	Met	Met	Gln 60	Gly	Gly	Val	Gly
Ile 65	Pro	Ser	Ile	Lys	Trp 70	Cys	Gly	Ala	Glu	Gly 75	Asp	Tyr	Asn	Val	Met 80
Val	Met	Glu	Leu	Leu 85	Gly	Pro	Ser	Leu	Glu 90	Asp	Leu	Phe	Asn	Phe 95	Суя
Ser	Arg	Lys	Phe 100	Ser	Leu	Lys	Thr	Val 105	Leu	Leu	Leu	Ala	Asp 110	Gln	Met
Ile	Ser	Arg 115	Ile	Glu	Tyr	Ile	His 120	Ser	Lys	Asn	Phe	Ile 125	His	Arg	Asp
Val	Lys 130	Pro	Asp	Asn	Phe	Leu 135	Met	Gly	Leu	Gly	Lys 140	Lys	Gly	Asn	Leu
Val 145	Tyr	Ile	Ile	Asp	Phe 150	Gly	Leu	Ala	Lys	Lys 155	Tyr	Arg	Asp	Ala	Arg 160
Thr	His	Gln	His	Ile 165	Pro	Tyr	Arg	Glu	Asn 170	Lys	Asn	Leu	Thr	Gly 175	Thi
Ala	Arg	Tyr	Ala 180	Ser	Ile	Asn	Thr	His 185	Leu	Gly	Ile	Glu	Gln 190	Ser	Arg
Arg	Asp	Asp 195	Leu	Glu	Ser	Leu	Gly 200	Tyr	Val	Leu	Met	Tyr 205	Phe	Asn	Le
Gly	Ser 210	Leu	Pro	Trp	Gln	Gly 215	Leu	Lys	Ala	Ala	Thr 220	Lys	Arg	Gln	Lys
Tyr 225	Glu	Arg	Ile	Ser	Glu 230	Lys	Lys	Met	Ser	Thr 235	Pro	Ile	Glu	Val	Le:
Cys	Lys	Gly	Tyr	Pro 245	Ser	Glu	Phe	Ser	Thr 250	Tyr	Leu	Asn	Phe	Cys 255	Arg
Ser	Leu	Arg	Phe 260	Asp	Asp	Lys	Pro	Asp 265	Tyr	Ser	Tyr	Leu	Arg 270	Gln	Let
Phe	Arg	Asn 275	Leu	Phe	His	Arg	Gln 280	Gly	Phe	Ser	Tyr	Asp 285	Tyr	Val	Phe
Asp	Trp 290	Asn	Met	Leu	Lys	Phe 295	Gly	Ala	Ala	Arg	Asn 300	Pro	Glu	Asp	Va:
Asp	Arg	Glu	Arg	Arg	Glu 310	His	Glu	Arg	Glu	Glu 315	Arg	Met	Gly	Gln	Le:

Arg Gly Ser Ala Thr Arg Ala Leu Pro Pro Gly Pro Pro Thr Gly Ala

Thr Ala Asn Arg Leu Arg Ser Ala Ala Glu Pro Val Ala Ser Thr Pro 340 345 350

Ala Ser Arg Ile Gln Pro Ala Gly Asn Thr Ser Pro Arg Ala Ile Ser 355 360 365

Arg Val Asp Arg Glu Arg Lys Val Ser Met Arg Leu His Arg Gly Ala 370 375 380

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Arg Ile Pro Ala Ser Gln Thr Ser Val Pro Phe Asp His Leu Gly Lys 405 410 415

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Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Ala Asn Ile Ala Ser Gly 20 25 30

Glu Glu Val Ala Ile Lys Leu Glu Cys Val Lys Thr Lys His Pro Gln 35 40 45

Leu His Ile Glu Ser Lys Phe Tyr Lys Met Met Gln Gly Gly Val Gly
50 60

Ile Pro Ser Ile Lys Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met 65 70 75 80

Val Met Glu Leu Cly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys
85 90 95

Ser Arg Lys Phe Ser Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met 100 105 110

Ile Ser Arg Ile Glu Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp 115 120 125

Val Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu 130 135 140

Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg 145 150 155 160

Thr His Gln His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr
165 170 175

Ala Arg Tyr Ala Ser Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg 180 Arq Asp Asp Leu Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu 200 Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala Ala Thr Lys Arg Gln Lys Tyr Glu Arg Ile Ser Glu Lys Lys Met Ser Thr Pro Ile Glu Val Leu Cys Lys Gly Tyr Pro Ser Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp Asp Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu 265 Phe Arg Asn Leu Phe His Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe 275 280 Asp Trp Asn Met Leu Lys Phe Gly Ala Ala Arg Asn Pro Glu Asp Val 295 Asp Arg Glu Arg Arg Glu His Glu Arg Glu Glu Arg Met Gly Gln Leu 305 310 320 Arg Gly Ser Ala Thr Arg Ala Leu Pro Pro Gly Pro Pro Thr Gly Ala 325 330 Thr Ala Asn Arg Leu Arg Ser Ala Ala Glu Pro Val Ala Ser Thr Pro 345 Ala Ser Arg Ile Gln Pro Ala Gly Asn Thr Ser Pro Arg Ala Ile Ser 355 Arg Val Asp Arg Glu Arg Lys Val Ser Met Arg Leu His Arg Gly Ala 375 Pro Ala Asn Val Ser Ser Ser Asp Leu Thr Gly Arg Gln Glu Val Ser 385 390 395 400 Arg Ile Pro Ala Ser Gln Thr Ser Val Pro Phe Asp His Leu Gly Lys 405 410 <210> 218 <211> 418 <212> PRT <213> Homo sapiens <400> 218 Met Leu Pro Glu Asp Lys Glu Ala Asp Ser Leu Arg Gly Asn Ile Ser 5

Val Lys Ala Val Lys Lys Glu Val Glu Lys Lys Leu Arg Cys Leu Leu 25

20

Ala	Asp	Leu 35	Pro	Leu	Pro	Pro	G1u 40	Leu	Pro	GIÀ	GIY	Asp 45	Asp	Leu	ser
Lys	Ser 50	Pro	Glu	Glu	Lys	Lys 55	Thr	Thr	Thr	Gln	Leu 60	His	Ser	Lys	Arg
Arg 65	Pro	Lys	Ile	Cys	Gly 70	Pro	Arg	Tyr	Gly	Glu 75	Thr	Lys	Glu	Lys	Asp 80
Ile	Asp	Trp	Gly	Lys 85	Leu	Cys	Val	Asp	Lys 90	Phe	Asp	Ile	Ile	Gly 95	Ile
Ile	Gly	Glu	Gly 100	Thr	Tyr	Gly	Gln	Val 105	Tyr	Lys	Ala	Arg	Asp 110	Lys	Asp
Thr	Gly	Glu 115	Met	Val	Ala	Leu	Lys 120	Lys	Val	Arg	Leu	Asp 125	Asn	Glu	Lys
Glu	Gly 130	Phe	Pro	Ile	Thr	Ala 135	Ile	Arg	Glu	Ile	Lys 140	Ile	Leu	Arg	Gln
Leu 145	Thr	His	Gln	Ser	Ile 150	Ile	Asn	Met	Lys	Glu 155	Ile	Val	Thr	Asp	Lys 160
Glu	Asp	Ala	Leu	Asp 165	Phe	Lys	Lys	Asp	Lys 170	Gly	Ala	Phe	Tyr	Leu 175	Val
Phe	Glu	Tyr	Met 180	Asp	His	Asp	Leu	Met 185	Gly	Leu	Leu	Glu	Ser 190	Gly	Leu
Val	His	Phe 195	Tyr	Glu	Asn	His	Ile 200	Lys	Ser	Phe	Met	Arg 205	Gln	Leu	Met
Glu	Gly 210	Leu	Asp	Tyr	Cys	His 215	Lys	Lys	Asn	Phe	Leu 220	His	Arg	Asp	Ile
Lys 225	Cys	Ser	Asn	Ile	Leu 230	Leu	Asn	Asn	Arg	Gly 235	Gln	Ile	Lys	Leu	Ala 240
Asp	Phe	Gly	Leu	Ala 245	Arg	Leu	Tyr	Ser	Ser 250	Glu	Glu	Ser	Arg	Pro 255	Tyr
Thr	Asn	Lys	Val 260	Ile	Thr	Leu	Trp	Tyr 265	Arg	Pro	Pro	Glu	Leu 270	Leu	Leu
Gly	Glu	Glu 275	Arg	Tyr	Thr	Pro	Ala 280	Ile	Asp	Val	Trp	Ser 285	Cys	Gly	Cys
Ile	Leu 290	Gly	Glu	Leu	Phe	Thr 295	Lys	Lys	Pro	Ile	Phe 300	Gln	Ala	Asn	Gln
Glu 305	Leu	Ala	Gln	Leu	Glu 310	Leu	Ile	Ser	Arg	Ile 315	Cys	Gly	Ser	Pro	Cys 320
Pro	Ala	Val	Trp	Pro 325	Asp	Val	Ile	Lys	Leu 330	Pro	Tyr	Phe	Asn	Thr 335	Met

Lys Pro Lys Lys Gln Tyr Arg Arg Lys Leu Arg Glu Glu Phe Val Phe 340 345 350

Ile Pro Ala Ala Ala Leu Asp Leu Phe Asp Tyr Met Leu Ala Leu Asp 355 360 365

Pro Ser Lys Arg Cys Thr Ala Glu Gln Ala Leu Gln Cys Glu Phe Leu 370 375 380

Arg Asp Val Glu Pro Ser Lys Cys Leu His Gln Ile Ser Leu Tyr Gly 385 390 395 400

Lys Ile Val Met Ser Tyr Gly Val Lys Ser Glu Glu Asp Arg Ser Arg
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Trp Ala

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<211> 1711

<212> PRT

<213> Homo sapiens

<400> 219

Met Ser Ala Lys Val Arg Leu Lys Lys Leu Glu Gln Leu Leu Leu Asp 1 5 10 15

Gly Pro Trp Arg Asn Glu Ser Ala Leu Ser Val Glu Thr Leu Leu Asp 20 25 30

Val Leu Val Cys Leu Tyr Thr Glu Cys Ser His Ser Ala Leu Arg Arg 35 40 45

Asp Lys Tyr Val Ala Glu Phe Leu Glu Trp Ala Lys Pro Phe Thr Gln 50 55 60

Leu Val Lys Glu Met Gln Leu His Arg Glu Asp Phe Glu Ile Ile Lys 70 75 80

Val Ile Gly Arg Gly Ala Phe Gly Glu Val Ala Val Lys Met Lys 85 90 95

Asn Thr Glu Arg Ile Tyr Ala Met Lys Ile Leu Asn Lys Trp Glu Met 100 105 110

Leu Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val Leu 115 120 125

Val Asn Gly Asp Cys Gln Trp Ile Thr Ala Leu His Tyr Ala Phe Gln 130 135 140

Asp Glu Asn His Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly Asp 145 150 155 160

Leu Leu Thr Leu Leu Ser Lys Phe Glu Asp Lys Leu Pro Glu Asp Met

Ala Arg Phe Tyr Ile Gly Glu Met Val Leu Ala Ile Asp Ser Ile His 185 Gln Leu His Tyr Val His Arg Asp Ile Lys Pro Asp Asn Val Leu Leu 200 Asp Val Asn Gly His Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu Lys 215 Met Asn Asp Asp Gly Thr Val Gln Ser Ser Val Ala Val Gly Thr Pro 235 240 225 230 Asp Tyr Ile Ser Pro Glu Ile Leu Gln Ala Met Glu Asp Gly Met Gly 250 Lys Tyr Gly Pro Glu Cys Asp Trp Trp Ser Leu Gly Val Cys Met Tyr 265 Glu Met Leu Tyr Gly Glu Thr Pro Phe Tyr Ala Glu Ser Leu Val Glu 280 Thr Tyr Gly Lys Ile Met Asn His Glu Glu Arg Phe Gln Phe Pro Ser His Val Thr Asp Val Ser Glu Glu Ala Lys Asp Leu Ile Gln Arg Leu 305 Ile Cys Ser Arg Glu Arg Arg Leu Gly Gln Asn Gly Ile Glu Asp Phe Lys Lys His Ala Phe Phe Glu Gly Leu Asn Trp Glu Asn Ile Arg Asn 345 Leu Glu Ala Pro Tyr Ile Pro Asp Val Ser Ser Pro Ser Asp Thr Ser 355 Asn Phe Asp Val Asp Asp Val Leu Arg Asn Thr Glu Ile Leu Pro Pro Gly Ser His Thr Gly Phe Ser Gly Leu His Leu Pro Phe Ile Gly 390 395 Phe Thr Phe Thr Thr Glu Ser Cys Phe Ser Asp Arg Gly Ser Leu Lys 405 410 Ser Ile Met Gln Ser Asn Thr Leu Thr Lys Asp Glu Asp Val Gln Arg 425 Asp Leu Glu His Ser Leu Gln Met Glu Ala Tyr Glu Arg Arg Ile Arg 435 Arg Leu Glu Glu Lys Leu Glu Leu Ser Arg Lys Leu Glu Glu Ser

Thr Gln Thr Val Gln Ser Leu His Gly Ser Ser Arg Ala Leu Ser Asn

Ser Asn Arg Asp Lys Glu Ile Lys Lys Leu Asn Glu Glu Ile Glu Arg 485 490 495

Leu Lys Asn Lys Ile Ala Asp Ser Asn Arg Leu Glu Arg Gln Leu Glu
500 505 510

Asp Thr Val Ala Leu Arg Gln Glu Arg Glu Asp Ser Thr Gln Arg Leu 515 520 525

Arg Gly Leu Glu Lys Gln His Arg Val Val Arg Gln Glu Lys Glu Glu 530 540

Leu His Lys Gln Leu Val Glu Ala Ser Glu Arg Leu Lys Ser Gln Ala 545 550 555 560

Lys Glu Leu Lys Asp Ala His Gln Gln Arg Lys Leu Ala Leu Gln Glu 565 570 575

Phe Ser Glu Leu Asn Glu Arg Met Ala Glu Leu Arg Ala Gln Lys Gln 580 585 590

Lys Val Ser Arg Gln Leu Arg Asp Lys Glu Glu Glu Met Glu Val Ala 595 600 605

Thr Gln Lys Val Asp Ala Met Arg Gln Glu Met Arg Arg Ala Glu Lys 610 620

Leu Arg Lys Glu Leu Glu Ala Gln Leu Asp Asp Ala Val Ala Glu Ala 625 635 640

Ser Lys Glu Arg Lys Leu Arg Glu His Ser Glu Asn Phe Cys Lys Gln 645 650 655

Met Glu Ser Glu Leu Glu Ala Leu Lys Val Lys Gln Gly Gly Arg Gly 660 665 670

Ala Gly Ala Thr Leu Glu His Gln Gln Glu Ile Ser Lys Ile Lys Ser 675 680 685

Glu Leu Glu Lys Lys Val Leu Phe Tyr Glu Glu Glu Leu Val Arg Arg 690 695 700

Glu Ala Ser His Val Leu Glu Val Lys Asn Val Lys Lys Glu Val His 705 710 715 720

Asp Ser Glu Ser His Gln Leu Ala Leu Gln Lys Glu Ile Leu Met Leu 725 730 735

Lys Asp Lys Leu Glu Lys Ser Lys Arg Glu Arg His Asn Glu Met Glu
740 745 750

Glu Ala Val Gly Thr Ile Lys Asp Lys Tyr Glu Arg Glu Arg Ala Met 755 760 765

Leu Phe Asp Glu Asn Lys Lys Leu Thr Ala Glu Asn Glu Lys Leu Cys

- Ser Phe Val Asp Lys Leu Thr Ala Gln Asn Arg Gln Leu Glu Asp Glu 785 790 795 800

 Leu Gln Asp Leu Ala Ala Lys Lys Glu Ser Val Ala His Trp Glu Ala 805 810 815
- Gln Ile Ala Glu Ile Ile Gln Trp Val Ser Asp Glu Lys Asp Ala Arg 820 825 830
- Gly Tyr Leu Gln Ala Leu Ala Ser Lys Met Thr Glu Glu Leu Glu Ala 835 840 845
- Leu Arg Ser Ser Ser Leu Gly Ser Arg Thr Leu Asp Pro Leu Trp Lys 850 855 860
- Val Arg Arg Ser Gln Lys Leu Asp Met Ser Ala Arg Leu Glu Leu Gln 865 870 875 880
- Ser Ala Leu Glu Ala Glu Ile Arg Ala Lys Gln Leu Val Gln Glu Glu 885 890 895
- Leu Arg Lys Val Lys Asp Ala Asn Leu Thr Leu Glu Ser Lys Leu Lys 900 905 910
- Asp Ser Glu Ala Lys Asn Arg Glu Leu Leu Glu Glu Met Glu Ile Leu 915 920 925
- Lys Lys Lys Met Glu Glu Lys Phe Arg Ala Asp Thr Gly Leu Lys Leu 930 935 940
- Pro Asp Phe Gln Asp Ser Ile Phe Glu Tyr Phe Asn Thr Ala Pro Leu 945 950 955 960
- Ala His Asp Leu Thr Phe Arg Thr Ser Ser Ala Ser Glu Gln Glu Thr 965 970 975
- Gln Ala Pro Lys Pro Glu Ala Ser Pro Ser Met Ser Val Ala Ala Ser 980 985 990
- Glu Gln Glu Asp Met Ala Arg Pro Pro Gln Arg Pro Ser Ala Val 995 1000 1005
- Pro Leu Pro Thr Thr Gln Ala Leu Val Leu Ala Gly Pro Lys Pro 1010 1015 1020
- Lys Ala His Gln Phe Ser Ile Lys Ser Phe Ser Ser Pro Thr Gln 1025 1030 1035
- Cys Ser His Cys Thr Ser Leu Met Val Gly Leu Ile Arg Gln Gly 1040 1045 1050
- Tyr Ala Cys Glu Val Cys Ser Phe Ala Cys His Val Ser Cys Lys 1055 1060 1065
- Asp Gly Ala Pro Gln Val Cys Pro Ile Pro Pro Glu Gln Ser Lys

1070 1075 1080

Arg	Pro 1085	Leu	Gly	Val	Asp	Val 1090	Gln	Arg	Gly	Ile	Gly 1095	Thr	Ala	Tyr
Lys	Gly 1100	His	Val	Lys	Val	Pro 1105	Lys	Pro	Thr	Gly	Val 1110	Lys	Lys	Gly
Trp	Gln 1115	Arg	Ala	Tyr	Ala	Val 1120	Val	Cys	Glu	Cys	Lys 1125	Leu	Phe	Leu
Tyr	Asp 1130	Leu	Pro	Glu	Gly	Lys 1135	Ser	Thr	Gln	Pro	Gly 1140	Val	Ile	Ala
Ser	Gln 1145	Val	Leu	Asp	Leu	Arg 1150	Asp	Asp	Glu	Phe	Ser 1155	Val	Ser	Ser
Val	Leu 1160	Ala	Ser	Asp	Val	Ile 1165	His	Ala	Thr	Arg	Arg 1170	Asp	Ile	Pro
Cys	Ile 1175	Phe	Arg	Val	Thr	Ala 1180	Ser	Leu	Leu	Gly	Ala 1185	Pro	Ser	Lys
Thr	Ser 1190	Ser	Leu	Leu	Ile	Leu 1195	Thr	Glu	Asn	Glu	Asn 1200	Glu	Lys	Arg
Lys	Trp 1205	Val	Gly	Ile	Leu	Glu 1210	Gly	Leu	Gln	Ser	Ile 1215	Leu	His	Lys
Asn	Arg 1220	Leu	Arg	Asn	Gln	Val 1225	Val	His	Val	Pro	Leu 1230	Glu	Ala	Tyr
-	1235					1240					Thr 1245			
Val	Asp 1250	Ala	Asp	Arg	Ile	Ala 1255	Val	Gly	Leu	Glu	Glu 1260	Gly	Leu	Tyr
Val	Ile 1265	Glu	Val	Thr	Arg	Asp 1270	Val	Ile	Val	Arg	Ala 1275	Ala	Asp	Cys
Lys	Lys 1280	Val	His	Gln	Ile	Glu 1285	Leu	Ala	Pro	Arg	Glu 1290	Lys	Ile	Val
	1295		_	_		1300					Leu 1305			
	1310			-		1315					Ile 1320			
	1325	_				1330					Thr 1335			
	1340	•		_		1345					Arg 1350			
Cve	Tizz	Glu	Tle	Gln	Δra	Thr	Lvs	Pro	Phe	His	Ara	Lvs	Phe	Asr

1355 1360 1365

Glu Ile 1370		Ala	Pro	Gly	Ser 1375	Val	Gln	Cys	Leu	Ala 1380	Val	Leu	Arg
Asp Arg 1385		Cys	Val	Gly	Tyr 1390	Pro	Ser	Gly		Cys 1395	Leu	Leu	Ser
Ile Gln 1400	_	Asp	Gly	Gln	Pro 1405	Leu	Asn	Leu	Val	Asn 1410	Pro	Asn	Asp
Pro Ser 1415		Ala	Phe	Leu	Ser 1420	Gln	Gln	Ser	Phe	Asp 1425	Ala	Leu	Cys
Ala Val 1430		Leu	Glu	Ser	Glu 1435	Glu	Tyr	Leu	Leu	Cys 1440	Phe	Ser	His
Met Gly 1445		Tyr	Val	Asp	Pro 1450	Gln	Gly	Arg	Arg	Ala 1455	Arg	Ala	Gln
Glu Leu 1460		Trp	Pro	Ala	Ala 1465	Pro	Val	Ala	Cys	Ser 1470	Cys	Ser	Pro
Thr His 1475		Thr	Val	Tyr	Ser 1480	Glu	Tyr	Gly	Val	Asp 1485	Val	Phe	Asp
Val Arg 1490		Met	Glu	Trp	Val 1495	Gln	Thr	Ile	Gly	Leu 1500	Arg	Arg	Ile
Arg Pro 1505		Asn	Ser	Glu	Gly 1510	Thr	Leu	Asn	Leu	Leu 1515	Asn	Cys	Glu
Pro Pro 1520	_	Leu	Ile	Tyr	Phe 1525	Lys	Ser	Lys	Phe	Ser 1530	Gly	Ala	Val
Leu Asn 1535		Pro	Asp	Thr	Ser 1540	Asp	Asn	Ser	Lys	Lys 1545	Gln	Met	Leu
Arg Thr 1550			_		1555				_	1560			
Glu Arg 1565		Gln	Gln	Arg	Arg 1570	Glu	Met	Leu	Arg	Asp 1575	Pro	Glu	Leu
Arg Ser 1580	_	Met	Ile	Ser	Asn 1585	Pro	Thr	Asn	Phe	Asn 1590	His	Val	Ala
His Met 1595	_	Pro	Gly	Asp	Gly 1600	Met	Gln	Val	Leu	Met 1605	Asp	Leu	Pro
Leu Ser 1610		Val	Pro	Pro	Ser 1615	Gln	Glu	Glu	Arg	Pro 1620	Gly	Pro	Ala
Pro Thr 1625		Leu	Ala	Arg	Gln 1630	Pro	Pro	Ser	Arg	Asn 1635	Lys	Pro	Tyr
Ile Ser	Trp	Pro	Ser	Ser	Gly	Gly	Ser	Glu	Pro	Ser	Val	Thr	Val

Pro Leu Arg Ser Met Ser Asp Pro Asp Gln Asp Phe Asp Lys Glu 1655 1660 1665

Pro Asp Ser Asp Ser Thr Lys His Ser Thr Pro Ser Asn Ser Ser 1670 1675 1680

Asn Pro Ser Gly Pro Pro Ser Pro Asn Ser Pro His Arg Ser Gln 1685 1690 1695

Leu Pro Leu Glu Gly Leu Glu Gln Pro Ala Cys Asp Thr 1700 1705 1710

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<213> Homo sapiens

<400> 220

Met Ser Ala Lys Val Arg Leu Lys Lys Leu Glu Gln Leu Leu Asp
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Gly Pro Trp Arg Asn Glu Ser Ala Leu Ser Val Glu Thr Leu Leu Asp 20 25 30

Val Leu Val Cys Leu Tyr Thr Glu Cys Ser His Ser Ala Leu Arg Arg 35 40 45

Asp Lys Tyr Val Ala Glu Phe Leu Glu Trp Ala Lys Pro Phe Thr Gln
50 55 60

Leu Val Lys Glu Met Gln Leu His Arg Glu Asp Phe Glu Ile Ile Lys 70 75 80

Val Ile Gly Arg Gly Ala Phe Gly Glu Val Ala Val Val Lys 85 90 95

Asn Thr Glu Arg Ile Tyr Ala Met Lys Ile Leu Asn Lys Trp Glu Met 100 105 110

Leu Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val Leu 115 120 125

Val Asn Gly Asp Cys Gln Trp Ile Thr Ala Leu His Tyr Ala Phe Gln 130 135 140

Asp Glu Asn His Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly Asp 145 150 155 160

Leu Leu Thr Leu Leu Ser Lys Phe Glu Asp Lys Leu Pro Glu Asp Met
165 170 175

Ala Arg Phe Tyr Ile Gly Glu Met Val Leu Ala Ile Asp Ser Ile His 180 185 190

Gln	Leu	His 195	Tyr	Val	His	Arg	Asp 200	Ile	Lys	Pro	Asp	Asn 205	Val	Leu	Leu
Asp	Val 210	Asn	Gly	His	Ile	Arg 215	Leu	Ala	Asp	Phe	Gly 220	Ser	Cys	Leu	Lys
Met 225	Asn	Asp	Asp	Gly	Thr 230	Val	Gln	Ser	Ser	Val 235	Ala	Val	Gly	Thr	Pro 240
Asp	Tyr	Ile	Ser	Pro 245	Glu	Ile	Leu	Gln	Ala 250	Met	Glu	Asp	Gly	Met 255	Gly
Lys	Tyr	Gly	Pro 260	Glu	Cys	Asp	Trp	Trp 265	Ser	Leu	Gly	Val	Cys 270	Met	Tyr
Glu	Met	Leu 275	Tyr	Gly	Glu	Thr	Pro 280	Phe	Tyr	Ala	Glu	Ser 285	Leu	Val	Glu
Thr	Tyr 290	Gly	Lys	Ile	Met	Asn 295	His	Glu	Glu	Arg	Phe 300	Gln	Phe	Pro	Ser
His 305	Val	Thr	Asp	Val	Ser 310	Glu	Glu	Ala	Lys	Asp 315	Leu	Ile	Gln	Arg	Leu 320
Ile	Cys	Ser	Arg	Glu 325	Arg	Arg	Leu	Gly	Gln 330	Asn	Gly	Ile	Glu	Asp 335	Phe
Lys	Lys	His	Ala 340	Phe	Phe	Glu	Gly	Leu 345	Asn	Trp	Glu	Asn	Ile 350	Arg	Asn
Leu	Glu	Ala 355	Pro	Tyr	Ile	Pro	Asp 360	Val	Ser	Ser	Pro	Ser 365	Asp	Thr	Ser
Asn	Phe 370	Asp	Val	Asp	Asp	Asp 375	Val	Leu	Arg	Asn	Thr 380	Glu	Ile	Leu	Pro
Pro 385	Gly	Ser	His	Thr	Gly 390	Phe	Ser	Gly	Leu	His 395	Leu	Pro	Phe	Ile	Gly 400
Phe	Thr	Phe	Thr	Thr 405	Glu	Ser	Cys	Phe	Ser 410	Asp	Arg	Gly	Ser	Leu 415	Lys
Ser	Ile	Met	Gln 420	Ser	Asn	Thr	Leu	Thr 425	Lys	Asp	Glu	Asp	Val 430	Gln	Arg
Asp	Leu	Glu 435	His	Ser	Leu	Gln	Met 440	Glu	Ala	Tyr	Glu	Arg 445	Arg	Ile	Arg
Arg	Leu 450	Glu	Gln	Glu	Lys	Leu 455	Glu	Leu	Ser	Arg	Lys 460	Leu	Gln	Glu	Ser
Thr 465	Gln	Thr	Val	Gln	Ser 470	Leu	His	Gly	Ser	Ser 475	Arg	Ala	Leu	Ser	Asn 480
Ser	Asn	Arg	Asp	Lys 485	Glu	Ile	Lys	Lys	Leu 490	Asn	Glu	Glu	Ile	Glu 495	Arg

- Leu Lys Asn Lys Ile Ala Asp Ser Asn Arg Leu Glu Arg Gln Leu Glu 500 505 510
- Asp Thr Val Ala Leu Arg Gln Glu Arg Glu Asp Ser Thr Gln Arg Leu 515 520 525
- Arg Gly Leu Glu Lys Gln His Arg Val Val Arg Gln Glu Lys Glu Glu 530 540
- Leu His Lys Gln Leu Val Glu Ala Ser Glu Arg Leu Lys Ser Gln Ala 545 550 555 560
- Lys Glu Leu Lys Asp Ala His Gln Gln Arg Lys Leu Ala Leu Gln Glu 565 570 575
- Phe Ser Glu Leu Asn Glu Arg Met Ala Glu Leu Arg Ala Gln Lys Gln 580 585 590
- Lys Val Ser Arg Gln Leu Arg Asp Lys Glu Glu Glu Met Glu Val Ala 595 600 605
- Thr Gln Lys Val Asp Ala Met Arg Gln Glu Met Arg Arg Ala Glu Lys 610 615 620
- Leu Arg Lys Glu Leu Glu Ala Gln Leu Asp Asp Ala Val Ala Glu Ala 625 630 635 640
- Ser Lys Glu Arg Lys Leu Arg Glu His Ser Glu Asn Phe Cys Lys Gln 645 650 655
- Met Glu Ser Glu Leu Glu Ala Leu Lys Val Lys Gln Gly Gly Arg Gly 660 665 670
- Ala Gly Ala Thr Leu Glu His Gln Gln Glu Ile Ser Lys Ile Lys Ser 675 680 685
- Glu Leu Glu Lys Lys Val Leu Phe Tyr Glu Glu Glu Leu Val Arg Arg 690 695 700
- Glu Ala Ser His Val Leu Glu Val Lys Asn Val Lys Lys Glu Val His 705 710 715 720
- Asp Ser Glu Ser His Gln Leu Ala Leu Gln Lys Glu Ile Leu Met Leu 725 730 735
- Lys Asp Lys Leu Glu Lys Ser Lys Arg Glu Arg His Asn Glu Met Glu
 740 745 750
- Glu Ala Val Gly Thr Ile Lys Asp Lys Tyr Glu Arg Glu Arg Ala Met
 755 760 765
- Leu Phe Asp Glu Asn Lys Lys Leu Thr Ala Glu Asn Glu Lys Leu Cys
 770 780
- Ser Phe Val Asp Lys Leu Thr Ala Gln Asn Arg Gln Leu Glu Asp Glu 785 790 795 800

- Leu Gln Asp Leu Ala Ala Lys Lys Glu Ser Val Ala His Trp Glu Ala 805 810 815
- Gln Ile Ala Glu Ile Ile Gln Trp Val Ser Asp Glu Lys Asp Ala Arg 820 825 830
- Gly Tyr Leu Gln Ala Leu Ala Ser Lys Met Thr Glu Glu Leu Glu Ala 835 840 845
- Leu Arg Ser Ser Ser Leu Gly Ser Arg Thr Leu Asp Pro Leu Trp Lys 850 855 860
- Val Arg Arg Ser Gln Lys Leu Asp Met Ser Ala Arg Leu Glu Leu Gln 865 870 875 880
- Ser Ala Leu Glu Ala Glu Ile Arg Ala Lys Gln Leu Val Gln Glu Glu 885 890 895
- Leu Arg Lys Val Lys Asp Ala Asn Leu Thr Leu Glu Ser Lys Leu Lys 900 905 910
- Asp Ser Glu Ala Lys Asn Arg Glu Leu Leu Glu Glu Met Glu Ile Leu 915 920 925
- Lys Lys Lys Met Glu Glu Lys Phe Arg Ala Asp Thr Gly Leu Lys Leu 930 935 940
- Pro Asp Phe Gln Asp Ser Ile Phe Glu Tyr Phe Asn Thr Ala Pro Leu 945 950 955 960
- Ala His Asp Leu Thr Phe Arg Thr Ser Ser Ala Ser Glu Glu Thr 965 970 975
- Gln Ala Pro Lys Pro Glu Ala Ser Pro Ser Met Ser Val Ala Ala Ser 980 985 990
- Glu Gln Gln Glu Asp Met Ala Arg Pro Pro Gln Arg Pro Ser Ala Val 995 1000 1005
- Pro Leu Pro Thr Thr Gln Ala Leu Val Leu Ala Gly Pro Lys Pro 1010 1015 1020
- Lys Ala His Gln Phe Ser Ile Lys Ser Phe Ser Ser Pro Thr Gln 1025 1030 1035
- Cys Ser His Cys Thr Ser Leu Met Val Gly Leu Ile Arg Gln Gly 1040 1045 1050
- Tyr Ala Cys Glu Val Cys Ser Phe Ala Cys His Val Ser Cys Lys 1055 1060 1065
- Asp Gly Ala Pro Gln Val Cys Pro Ile Pro Pro Glu Gln Ser Lys 1070 1075 1080
- Arg Pro Leu Gly Val Asp Val Gln Arg Gly Ile Gly Thr Ala Tyr 1085 1090 1095

- Lys Gly His Val Lys Val Pro Lys Pro Thr Gly Val Lys Lys Gly 1100 1105 1110
- Trp Gln Arg Ala Tyr Ala Val Val Cys Glu Cys Lys Leu Phe Leu 1115 1120 1125
- Tyr Asp Leu Pro Glu Gly Lys Ser Thr Gln Pro Gly Val Ile Ala 1130 1135 1140
- Ser Gln Val Leu Asp Leu Arg Asp Asp Glu Phe Ser Val Ser Ser 1145 1150 1155
- Val Leu Ala Ser Asp Val Ile His Ala Thr Arg Arg Asp Ile Pro 1160 1165 1170
- Cys Ile Phe Arg Val Thr Ala Ser Leu Leu Gly Ala Pro Ser Lys 1175 1180 1185
- Thr Ser Ser Leu Leu Ile Leu Thr Glu Asn Glu Asn Glu Lys Arg 1190 1195 1200
- Lys Trp Val Gly Ile Leu Glu Gly Leu Gln Ser Ile Leu His Lys 1205 1210 1215
- Asn Arg Leu Arg Asn Gln Val Val His Val Pro Leu Glu Ala Tyr 1220 1225 1230
- Asp Ser Ser Leu Pro Leu Ile Lys Ala Ile Leu Thr Ala Ala Ile 1235 1240 1245
- Val Asp Ala Asp Arg Ile Ala Val Gly Leu Glu Glu Gly Leu Tyr 1250 1255 1260
- Val Ile Glu Val Thr Arg Asp Val Ile Val Arg Ala Asp Cys 1265 1270 1275
- Lys Lys Val His Gln Ile Glu Leu Ala Pro Arg Glu Lys Ile Val 1280 1285 1290
- Ile Leu Leu Cys Gly Arg Asn His His Val His Leu Tyr Pro Trp 1295 1300 1305
- Ser Ser Leu Asp Gly Ala Glu Gly Ser Phe Asp Ile Lys Leu Pro 1310 1315 1320
- Glu Thr Lys Gly Cys Gln Leu Met Ala Thr Ala Thr Leu Lys Arg 1325 1330 1335
- Asn Ser Gly Thr Cys Leu Phe Val Ala Val Lys Arg Leu Ile Leu 1340 1345 1350
- Cys Tyr Glu Ile Gln Arg Thr Lys Pro Phe His Arg Lys Phe Asn 1355 1360 1365
- Glu Ile Val Ala Pro Gly Ser Val Gln Cys Leu Ala Val Leu Arg 1370 1375 1380

- Asp Arg Leu Cys Val Gly Tyr Pro Ser Gly Phe Cys Leu Leu Ser 1385 1390 1395

 Ile Gln Gly Asp Gly Gln Pro Leu Asn Leu Val Asn Pro Asn Asp 1400 1405 1410
- Pro Ser Leu Ala Phe Leu Ser Gln Gln Ser Phe Asp Ala Leu Cys 1415 1420 1425
- Ala Val Glu Leu Glu Ser Glu Glu Tyr Leu Leu Cys Phe Ser His 1430 1435 1440
- Met Gly Leu Tyr Val Asp Pro Gln Gly Arg Arg Ala Arg Ala Gln 1445 1450 1455
- Glu Leu Met Trp Pro Ala Ala Pro Val Ala Cys Ser Cys Ser Pro 1460 1465 1470
- Thr His Val Thr Val Tyr Ser Glu Tyr Gly Val Asp Val Phe Asp 1475 1480 1485
- Val Arg Thr Met Glu Trp Val Gln Thr Ile Gly Leu Arg Arg Ile 1490 1495 1500
- Arg Pro Leu Asn Ser Glu Gly Thr Leu Asn Leu Leu Asn Cys Glu 1505 1510 1515
- Pro Pro Arg Leu Ile Tyr Phe Lys Ser Lys Phe Ser Gly Ala Val 1520 1530
- Leu Asn Val Pro Asp Thr Ser Asp Asn Ser Lys Lys Gln Met Leu 1535 1540 1545
- Arg Thr Arg Ser Lys Arg Arg Phe Val Phe Lys Val Pro Glu Glu 1550 1555 1560
- Glu Arg Leu Gln Gln Arg Arg Glu Met Leu Arg Asp Pro Glu Leu 1565 1570 1575
- Arg Ser Lys Met Ile Ser Asn Pro Thr Asn Phe Asn His Val Ala 1580 1585 1590
- His Met Gly Pro Gly Asp Gly Met Gln Val Leu Met Asp Leu Pro 1595 1600 1605
- Leu Ser Ala Val Pro Pro Ser Gln Glu Glu Arg Pro Gly Pro Ala 1610 1615 1620
- Pro Thr Asn Leu Ala Arg Gln Pro Pro Ser Arg Asn Lys Pro Tyr 1625 1630 1635
- Ile Ser Trp Pro Ser Ser Gly Gly Ser Glu Pro Ser Val Thr Val 1640 1645 1650
- Pro Leu Arg Ser Met Ser Asp Pro Asp Gln Asp Phe Asp Lys Glu 1655 1660 1665

Pro Asp Ser Asp Ser Thr Lys His Ser Thr Pro Ser Asn Ser Ser 1670 1675 1680

Asn Pro Ser Gly Pro Pro Ser Pro Asn Ser Pro His Arg Ser Gln 1685 1690 1695

Leu Pro Leu Glu Gly Leu Glu Gln Pro Ala Cys Asp Thr 1700 1705 1710

<210> 221

<211> 415

<212> PRT

<213> Homo sapiens

<400> 221

Met Glu Leu Arg Val Gly Asn Arg Tyr Arg Leu Gly Arg Lys Ile Gly

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Ser Gly Ser Phe Gly Asp Ile Tyr Leu Gly Thr Asp Ile Ala Ala Gly
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Glu Glu Val Ala Ile Lys Leu Glu Cys Val Lys Thr Lys His Pro Gln 35 40 45

Leu His Ile Glu Ser Lys Ile Tyr Lys Met Met Gln Gly Gly Val Gly 50 55 60

Ile Pro Thr Ile Arg Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met 70 75 80

Val Met Glu Leu Leu Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys 85 90 95

Ser Arg Lys Phe Ser Leu Lys Thr Val Leu Leu Ala Asp Gln Met
100 105 110

Ile Ser Arg Ile Glu Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp 115 120 125

Val Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu 130 135 140

Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg 145 150 155 160

Thr His Gln His Ile Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr
165 170 175

Ala Arg Tyr Ala Ser Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg 180 185 190

Arg Asp Asp Leu Glu Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu
195 200 205

Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala Ala Thr Lys Arg Gln Lys 210 215 220

Tyr Glu Arg Ile Ser Glu Lys Lys Met Ser Thr Pro Ile Glu Val Leu 230 Cys Lys Gly Tyr Pro Ser Glu Phe Ala Thr Tyr Leu Asn Phe Cys Arg 245 250 Ser Leu Arg Phe Asp Asp Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe His Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe 280 Asp Trp Asn Met Leu Lys Phe Gly Ala Ser Arg Ala Ala Asp Asp Ala 290 295 Glu Arg Glu Arg Arg Asp Arg Glu Glu Arg Leu Arg His Ser Arg Asn 305 310 Pro Ala Thr Arg Gly Leu Pro Ser Thr Asp Ser Gly Arg Leu Arg Gly Thr Gln Glu Val Ala Pro Pro Thr Pro Leu Thr Pro Thr Ser His Thr Ala Asn Thr Ser Pro Arg Pro Val Ser Gly Met Glu Arg Glu Arg Lys Val Ser Met Arg Leu His Arg Gly Ala Pro Val Asn Ile Ser Ser Ser 375 Asp Leu Thr Gly Arg Gln Asp Thr Ser Arg Met Ser Thr Ser Gln Ile 385 390 Pro Gly Arg Val Ala Ser Ser Gly Leu Gln Ser Val Val His Arg 405 410 <210> 222 <211> 1169 <212> PRT <213> Homo sapiens <400> 222 Met Asn Met Phe Leu Tyr Phe Gln Thr Ile Ile Lys Glu Gly Met Leu Thr Lys Gln Asn Asn Ser Phe Gln Arg Ser Lys Arg Arg Tyr Phe Lys 25 Leu Arg Gly Arg Thr Leu Tyr Tyr Ala Lys Thr Ala Lys Ser Ile Ile 35

Phe Asp Glu Val Asp Leu Thr Asp Ala Ser Val Ala Glu Ser Ser Thr

Lys Asn Val Asn Asn Ser Phe Thr Val Ile Thr Pro Cys Arg Lys Leu

Ile Leu Cys Ala Asp Asn Arg Lys Glu Met Glu Asp Trp Ile Ala Ala 85 90 95

65

Leu Lys Thr Val Gln Asn Arg Glu His Phe Glu Pro Thr Gln Tyr Ser 100 105 110

Met Asp His Phe Ser Gly Met His Asn Trp Tyr Ala Cys Ser His Ala 115 120 125

Arg Pro Thr Tyr Cys Asn Val Cys Arg Glu Ala Leu Ser Gly Val Thr 130 135 140

Ser His Gly Leu Ser Cys Glu Val Cys Lys Phe Lys Ala His Lys Arg 145 150 155 160

Cys Ala Val Arg Ala Thr Asn Asn Cys Lys Trp Thr Thr Leu Ala Ser 165 170 175

Ile Gly Lys Asp Ile Ile Glu Asp Ala Asp Gly Ile Ala Met Pro His
180 185 190

Gln Trp Leu Glu Gly Asn Leu Pro Val Ser Ala Lys Cys Thr Val Cys 195 200 205

Asp Lys Thr Cys Gly Ser Val Leu Arg Leu Gln Asp Trp Arg Cys Leu 210 215 220

Trp Cys Lys Ala Met Val His Thr Ser Cys Lys Glu Ser Leu Leu Thr 225 230 235 240

Lys Cys Pro Leu Gly Leu Cys Lys Val Ser Val Ile Pro Pro Thr Ala 245 250 255

Leu Asn Ser Ile Asp Ser Asp Gly Phe Trp Lys Ala Ser Cys Pro Pro 260 265 270

Ser Cys Thr Ser Pro Leu Leu Val Phe Val Asn Ser Lys Ser Gly Asp 275 280 285

Asn Gln Gly Val Lys Phe Leu Arg Arg Phe Lys Gln Leu Leu Asn Pro 290 295 300

Ala Gln Val Phe Asp Leu Met Asn Gly Gly Pro His Leu Gly Leu Arg 305 310 315 320

Leu Phe Gln Lys Phe Asp Thr Phe Arg Ile Leu Val Cys Gly Gly Asp 325 330 335

Gly Ser Val Gly Trp Val Leu Ser Glu Ile Asp Ser Leu Asn Leu His

Lys Gln Cys Gln Leu Gly Val Leu Pro Leu Gly Thr Gly Asn Asp Leu 355 360 365

Ala Arg Val Leu Gly Trp Gly Ser Ala Cys Asp Asp Asp Thr Gln Leu

370

380

Pro Gln Ile Leu Glu Lys Leu Glu Arg Ala Ser Thr Lys Met Leu Asp 395 390 Arg Trp Ser Val Met Ala Tyr Glu Ala Lys Leu Pro Arg Gln Ala Ser 405 410 Ser Ser Thr Val Thr Glu Asp Phe Ser Glu Asp Ser Glu Val Gln Gln 425 Ile Leu Phe Tyr Glu Asp Ser Val Ala Ala His Leu Ser Lys Ile Leu 435 Thr Ser Asp Gln His Ser Val Val Ile Ser Ser Ala Lys Val Leu Cys Glu Thr Pro Lys Asp Phe Val Ala Arg Val Gly Lys Ala Tyr Glu Lys 470 475 Thr Thr Glu Ser Ser Glu Glu Ser Glu Val Met Ala Lys Lys Cys Ser 485 490 Val Leu Lys Glu Lys Leu Asp Ser Leu Leu Lys Thr Leu Asp Asp Glu 505 Ser Gln Ala Ser Ser Ser Leu Pro Asn Pro Pro Pro Thr Ile Ala Glu 515 520 Glu Ala Glu Asp Gly Asp Gly Ser Gly Ser Ile Cys Gly Ser Thr Gly Asp Arg Leu Val Ala Ser Ala Cys Pro Ala Arg Pro Gln Ile Phe Arg 550 555 Pro Arg Glu Gln Leu Met Leu Arg Ala Asn Ser Leu Lys Lys Ala Ile 565 Arg Gln Ile Ile Glu His Thr Glu Lys Ala Val Asp Glu Gln Asn Ala Gln Thr Gln Glu Gln Glu Gly Phe Val Leu Gly Leu Ser Glu Ser Glu Glu Lys Met Asp His Arg Val Cys Pro Pro Leu Ser His Ser Glu Ser 610 615 Phe Gly Val Pro Lys Gly Arg Ser Gln Arg Lys Val Ser Lys Ser Pro Cys Glu Lys Leu Ile Ser Lys Gly Ser Leu Ser Leu Gly Ser Ser Ala Ser Leu Pro Pro Gln Pro Gly Ser Arg Asp Gly Leu Pro Ala Leu Asn 660 665 Thr Lys Ile Leu Tyr Pro Asn Val Arg Ala Gly Met Ser Gly Ser Leu Pro Gly Gly Ser Val Ile Ser Arg Leu Leu Ile Asn Ala Asp Pro Phe 695 Asn Ser Glu Pro Glu Thr Leu Glu Tyr Tyr Thr Glu Lys Cys Val Met 710 Asn Asn Tyr Phe Gly Ile Gly Leu Asp Ala Lys Ile Ser Leu Asp Phe 730 Asn Asn Lys Arg Asp Glu His Pro Glu Lys Cys Arg Ser Arg Thr Lys 740 Asn Met Met Trp Tyr Gly Val Leu Gly Thr Lys Glu Leu Leu His Arg Thr Tyr Lys Asn Leu Glu Gln Lys Val Leu Leu Glu Cys Asp Gly Asp 775 Pro Ser His Ser Pro Val Leu Gln Gly Ile Ala Val Leu Asn Ile Pro 785 790 Ser Tyr Ala Gly Gly Thr Asn Phe Trp Gly Gly Thr Lys Glu Asp Asp Thr Phe Ala Ala Pro Ser Phe Asp Asp Lys Ile Leu Glu Val Val Ala 825 830 Val Phe Gly Ser Met Gln Met Ala Val Ser Arg Val Ile Arg Leu Gln 840 His His Arg Ile Ala Gln Cys Arg Thr Val Lys Ile Ser Ile Leu Gly 855 Asp Glu Gly Val Pro Val Gln Val Asp Gly Glu Ala Trp Val Gln Pro 865 Pro Gly Tyr Ile Arg Ile Val His Lys Asn Arg Ala Gln Thr Leu Thr Arg Asp Arg Ala Phe Glu Ser Thr Leu Lys Ser Trp Glu Asp Lys Gln Lys Cys Glu Val Pro Arg Pro Pro Ser Cys Ser Leu His Pro Glu Met 915 Leu Ser Glu Glu Glu Ala Thr Gln Met Asp Gln Phe Gly Gln Ala Ala Gly Val Leu Ile His Ser Ile Arg Glu Ile Ala Gln Ser His Arg Asp 950 945 Met Glu Gln Glu Leu Ala His Ala Val Asn Ala Ser Ser Lys Ser Met 965 970 Asp Arg Val Tyr Gly Lys Pro Arg Thr Thr Glu Gly Leu Asn Cys Ser

980 985 990

Phe Val Leu Glu Met Val Asn Asn Phe Arg Ala Leu Arg Ser Glu Thr 995 1000 1005

- Glu Leu Leu Ser Gly Lys Met Ala Leu Gln Leu Asp Pro Pro Gln 1010 1015 1020
- Lys Glu Gln Leu Gly Ser Ala Leu Ala Glu Met Asp Arg Gln Leu 1025 1030 1035
- Arg Arg Leu Ala Asp Thr Pro Trp Leu Cys Gln Ser Ala Glu Pro 1040 1045 1050
- Gly Asp Glu Glu Ser Val Met Leu Asp Leu Ala Lys Arg Ser Arg 1055 1060 1065
- Ser Gly Lys Phe Arg Leu Val Thr Lys Phe Lys Lys Glu Lys Asn 1070 1075 1080
- Asn Lys Asn Lys Glu Ala His Ser Ser Leu Gly Ala Pro Val His 1085 1090 1095
- Leu Trp Gly Thr Glu Glu Val Ala Ala Trp Leu Glu His Leu Ser 1100 1105 1110
- Leu Cys Glu Tyr Lys Asp Ile Phe Thr Arg His Asp Ile Arg Gly
 1115 1120 1125
- Ser Glu Leu Leu His Leu Glu Arg Arg Asp Leu Lys Asp Leu Gly 1130 1135 1140
- Val Thr Lys Val Gly His Met Lys Arg Ile Leu Cys Gly Ile Lys 1145 1150 1155
- Glu Leu Ser Arg Ser Ala Pro Ala Val Glu Ala 1160 1165

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<211> 480

<212> PRT

<213> Homo sapiens

<400> 223

- Met Ser Asp Val Ala Ile Val Lys Glu Gly Trp Leu His Lys Arg Gly
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- Glu Tyr Ile Lys Thr Trp Arg Pro Arg Tyr Phe Leu Leu Lys Asn Asp 20 25 30
- Gly Thr Phe Ile Gly Tyr Lys Glu Arg Pro Gln Asp Val Asp Gln Arg 35 40 45
- Glu Ala Pro Leu Asn Asn Phe Ser Val Ala Gln Cys Gln Leu Met Lys 50 55 60

Thr 65	Glu	Arg	Pro	Arg	Pro 70	Asn	Thr	Phe	Ile	Ile 75	Arg	Cys	Leu	Gln	Trp 80
Thr	Thr	Val	Ile	Glu 85	Arg	Thr	Phe	His	Val 90	Glu	Thr	Pro	Glu	Glu 95	Arg
Glu	Glu	Trp	Thr 100	Thr	Ala	Ile	Gln	Thr 105	Val	Ala	Asp	Gly	Leu 110	Lys	Lys
Gln	Glu	Glu 115	Glu	Glu	Met	Asp	Phe 120	Arg	Ser	Gly	Ser	Pro 125	Ser	Asp	Asn
Ser	Gly 130	Ala	Glu	Glu	Met	Glu 135	Val	Ser	Leu	Ala	Lys 140	Pro	Lys	His	Arg
Val 145	Thr	Met	Asn	Glu	Phe 150	Glu	Tyr	Leu	Lys	Leu 155	Leu	Gly	Lys	Gly	Thr 160
Phe	Gly	Lys	Val	Ile 165	Leu	Val	Lys	Glu	Lys 170	Ala	Thr	Gly	Arg	Tyr 175	Tyr
Ala	Met	Lys	Ile 180	Leu	Lys	Lys	Glu	Val 185	Ile	Val	Ala	Lys	Asp 190	Glu	Val
Ala	His	Thr 195	Leu	Thr	Glu	Asn	Arg 200	Val	Leu	Gln	Asn	Ser 205	Arg	His	Pro
Phe	Leu 210	Thr	Ala	Leu	Lys	Tyr 215	Ser	Phe	Gln	Thr	His 220	Asp	Arg	Leu	Cys
Phe 225	Val	Met	Glu	Tyr	Ala 230	Asn	Gly	Gly	Glu	Leu 235	Phe	Phe	His	Leu	Ser 240
Arg	Glu	Arg	Val	Phe 245	Ser	Glu	Asp	Arg	Ala 250	Arg	Phe	Tyr	Gly	Ala 255	Glu
Ile	Val	Ser	Ala 260	Leu	Asp	Tyr	Leu	His 265	Ser	Glu	Lys	Asn	Val 270	Val	Tyr
Arg	Asp	Leu 275	Lys	Leu	Glu	Asn	Leu 280	Met	Leu	Asp	Lys	Asp 285	Gly	His	Ile
Lys	Ile 290	Thr	Asp	Phe	Gly	Leu 295	Cys	Lys	Glu	Gly	Ile 300	Lys	Asp	Gly	Ala
Thr 305	Met	Lys	Thr	Phe	Cys 310	Gly	Thr	Pro	Glu	Tyr 315	Leu	Ala	Pro	Glu	Val 320
Leu	Glu	Asp	Asn	Asp 325	Tyr	Gly	Arg	Ala	Val 330	Asp	Trp	Trp	Gly	Leu 335	Gly
Val	Val	Met	Tyr 340	Glu	Met	Met	Cys	Gly 345	Arg	Leu	Pro	Phe	Tyr 350	Asn	Gln
Asp	His	Glu 355	Lys	Leu	Phe	Glu	Leu 360	Ile	Leu	Met	Glu	Glu 365	Ile	Arg	Phe

Pro	Arg 370	Thr	Leu	Gly	Pro	Glu 375	Ala	Lys	Ser	Leu	Leu 380	Ser	Gly	Leu	Leu
Lys 385	Lys	Asp	Pro	Lys	Gln 390	Arg	Leu	Gly	Gly	Gly 395	Ser	Glu	Asp	Ala	Lys 400
Glu	Ile	Met	Gln	His 405	Arg	Phe	Phe	Ala	Gly 410	Ile	Val	Trp	Gln	His 415	Val
Tyr	Glu	Lys	Lys 420	Leu	Ser	Pro	Pro	Phe 425	Lys	Pro	Gln	Val	Thr 430	Ser	Glu
Thr	Asp	Thr 435	Arg	Tyr	Phe	Asp	Glu 440	Glu	Phe	Thr	Ala	Gln 445	Met	Ile	Thr
Ile	Thr 450	Pro	Pro	Asp	Gln	Asp 455	Asp	Ser	Met	Glu	Cys 460	Val	Asp	Ser	Glu
Arg 465	Arg	Pro	His	Phe	Pro 470	Gln	Phe	Ser	Tyr	Ser 475	Ala	Ser	Ser	Thr	Ala 480
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Lys	Val	Met	Asp 20	Val	Thr	Glu	Asp	Glu 25	Glu	Glu	Glu	Ile	Lys 30	Leu	Glu
Ile	Asn	Met 35	Leu	Lys	Lys	Tyr	Ser 40	His	His	Arg	Asn	Ile 45	Ala	Thr	Tyr
Tyr	Gly 50	Ala	Phe	Ile	Lys	Lys 55	Ser	Pro	Pro	Gly	His 60	Asp	Asp	Gln	Leu
Trp 65	Leu	Val	Met	Glu	Phe 70	Cys	Gly	Ala	Gly	Ser 75	Ile	Thr	Asp	Leu	Val 80
Lys	Asn	Thr	Lys	Gly 85	Asn	Thr	Leu	Lys	Glu 90	Asp	Trp	Ile	Ala	Tyr 95	Ile
Ser	Arg	Glu	Ile 100	Leu	Arg	Gly	Leu	Ala 105	His	Leu	His	Ile	His 110	His	Val
Ile	His	Arg 115	Asp	Ile	Lys	Gly	Gln 120	Asn	Val	Leu	Leu	Thr 125	Glu	Asn	Ala
Glu	Val 130	Lys	Leu	Val	Asp	Phe 135	Gly	Val	Ser	Ala	Gln 140	Leu	Asp	Arg	Thr

Glu	Val	Ile	Ala	Cys 165	Asp	Glu	Asn	Pro	Asp 170	Ala	Thr	Tyr	Asp	Tyr 175	Arg
Ser	Asp	Leu	Trp 180	Ser	Cys	Gly	Ile	Thr 185	Ala	Ile	Glu	Met	Ala 190	Glu	Gly
Ala	Pro	Pro 195	Leu	Cys	Asp	Met	His 200	Pro	Met	Arg	Ala	Leu 205	Phe	Leu	Ile
Pro	Arg 210	Asn	Pro	Pro	Pro	Arg 215	Leu	Lys	Ser	Lys	Lys 220	Trp	Ser	Lys	Lys
Phe 225	Phe	Ser	Phe	Ile	Glu 230	Gly	Cys	Leu	Val	Lys 235	Asn	Tyr	Met	Gln	Arg 240
Pro	Ser	Thr	Glu	Gln 245	Leu	Leu	Lys	His	Pro 250	Phe	Ile	Arg	Asp	Gln 255	Pro
Asn	Glu	Arg	Gln 260	Val	Arg	Ile	Gln	Leu 265	Lys	Asp	His	Ile	Asp 270	Arg	Thr
Arg	Lys	Lys 275	Arg	Gly	Glu	Lys	Asp 280	Glu	Thr	Glu	Tyr	Glu 285	Tyr	Ser	Gly
Ser	Glu 290	Glu	Glu	Glu	Glu	Glu 295	Val	Pro	Glu	Gln	Glu 300	Gly	Glu	Pro	Ser
Ser 305	Ile	Val	Asn	Val	Pro 310	Gly	Glu	Ser	Thr	Leu 315	Arg	Arg	Asp	Phe	Leu 320
Arg	Leu	Gln	Gln	Glu 325	Asn	Lys	Glu	Arg	Ser 330	Glu	Ala	Leu	Arg	Arg 335	Gln
Gln	Leu	Leu	Gln 340	Glu	Gln	Gln	Leu	Arg 345	Glu	Gln	Glu	Glu	Tyr 350	Lys	Arg
Gln	Leu	Leu 355	Ala	Glu	Arg	Gln	Lys 360	Arg	Ile	Glu	Gln -	Gln 365	Lys	Glu	Gln
Arg	Arg 370	Arg	Leu	Glu	Glu	Gln 375	Gln	Arg	Arg	Glu	Arg 380	Glu	Ala	Arg	Arg
Gln 385	Gln	Glu	Arg	Glu	Gln 390	Arg	Arg	Arg	Glu	Gln 395	Glu	Glu	Lys	Arg	Arg 400
Leu	Glu	Glu	Leu	Glu 405	Arg	Arg	Arg	Lys	Glu 410	Glu	Glu	Glu	Arg	Arg 415	Arg
Ala	Glu	Glu	Glu 420	Lys	Arg	Arg	Val	Glu 425	Arg	Glu	Gln	Glu	Tyr 430	Ile	Arg
Arg	Gln	Leu 435	Glu	Glu	Glu	Gln	Arg 440	His	Leu	Glu	Val	Leu 445	Gln	Gln	Gln
Leu	Leu 450	Gln	Glu	Gln	Ala	Met 455	Leu	Leu	His	Asp	His 460	Arg	Arg	Pro	His

Pro Gln His Ser Gln Gln Pro Pro Pro Gln Gln Glu Arg Ser Lys 470 475 Pro Ser Phe His Ala Pro Glu Pro Lys Ala His Tyr Glu Pro Ala Asp 485 490 Arg Ala Arg Glu Val Glu Asp Arg Phe Arg Lys Thr Asn His Ser Ser 505 Pro Glu Ala Gln Ser Lys Gln Thr Gly Arg Val Leu Glu Pro Pro Val 520 Pro Ser Arg Ser Glu Ser Phe Ser Asn Gly Asn Ser Glu Ser Val His 535 Pro Ala Leu Gln Arg Pro Ala Glu Pro Gln Val Pro Val Arg Thr Thr 550 555 Ser Arg Ser Pro Val Leu Ser Arg Arg Asp Ser Pro Leu Gln Gly Ser 570 Gly Gln Gln Asn Ser Gln Ala Gly Gln Arg Asn Ser Thr Ser Ser Ile Glu Pro Arg Leu Leu Trp Glu Arg Val Glu Lys Leu Val Pro Arg Pro 600 Gly Ser Gly Ser Ser Gly Ser Ser Asn Ser Gly Ser Gln Pro Gly 615 Ser His Pro Gly Ser Gln Ser Gly Ser Gly Glu Arg Phe Arg Val Arg 630 Ser Ser Ser Lys Ser Glu Gly Ser Pro Ser Gln Arg Leu Glu Asn Ala 650 Val Lys Lys Pro Glu Asp Lys Lys Glu Val Phe Arg Pro Leu Lys Pro 660 Ala Gly Glu Val Asp Leu Thr Ala Leu Ala Lys Glu Leu Arg Ala Val Glu Asp Val Arg Pro Pro His Lys Val Thr Asp Tyr Ser Ser Ser Ser Glu Glu Ser Gly Thr Thr Asp Glu Glu Asp Asp Asp Val Glu Glu Glu 705 Gly Ala Asp Glu Ser Thr Ser Gly Pro Glu Asp Thr Arg Ala Ala Ser Ser Leu Asn Leu Ser Asn Gly Glu Thr Glu Ser Val Lys Thr Met Ile 740 745 Val His Asp Asp Val Glu Ser Glu Pro Ala Met Thr Pro Ser Lys Glu 760 765 755

- Gly Thr Leu Ile Val Arg Gln Thr Gln Ser Ala Ser Ser Thr Leu Gln 770 775 780
- Lys His Lys Ser Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro Arg Leu 785 790 795 800
- Leu Gln Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly 805 810 815
- Phe Ser Cys Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr 820 825 830
- Arg Lys Gly Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln 835 840 845
- Ser Asp Thr Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu 850 855 860
- Ile Leu Cys Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu 865 870 875 880
- Ser Gly Leu Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro 885 890 895
- Leu Ile Asn Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu
 900 905 910
- Asn Val Leu Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr 915 920 925
- Tyr Leu Ser Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val 930 935 940
- Glu Lys Lys Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val 945 950 955 960
- His Tyr Lys Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala 965 970 975
- Leu Lys Ser Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His 980 985 990
- Lys Phe Met Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu 995 1000 1005
- Leu Val Asp Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile 1010 1015 1020
- Tyr Gly Ser Cys Ala Gly Phe His Ala Val Asp Val Asp Ser Gly 1025 1030 1035
- Ser Val Tyr Asp Ile Tyr Leu Pro Thr His Ile Gln Cys Ser Ile 1040 1045 1050
- Lys Pro His Ala Ile Ile Ile Leu Pro Asn Thr Asp Gly Met Glu 1055 1060 1065

- Leu Leu Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr Tyr 1070 1075 1080
- Gly Arg Ile Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro 1085 1090 1095
- Thr Ser Val Ala Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly 1100 1105 1110
- Glu Lys Ala Ile Glu Ile Arg Ser Val Glu Thr Gly His Leu Asp 1115 1120 1125
- Gly Val Phe Met His Lys Arg Ala Gln Arg Leu Lys Phe Leu Cys 1130 1135 1140
- Glu Arg Asn Asp Lys Val Phe Phe Ala Ser Val Arg Ser Gly Gly 1145 1150 1155
- Ser Ser Gln Val Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu Leu 1160 1165 1170

Ser Trp 1175

<210> 225

<211> 1175

<212> PRT

<213> Homo sapiens

<400> 225

- Gln Val Tyr Lys Gly Arg His Val Lys Thr Gly Gln Leu Ala Ala Ile 1 5 10 15
- Lys Val Met Asp Val Thr Glu Asp Glu Glu Glu Glu Ile Lys Leu Glu 20 25 30
- Ile Asn Met Leu Lys Lys Tyr Ser His His Arg Asn Ile Ala Thr Tyr 35 40 45
- Tyr Gly Ala Phe Ile Lys Lys Ser Pro Pro Gly His Asp Asp Gln Leu 50 55 60
- Trp Leu Val Met Glu Phe Cys Gly Ala Gly Ser Ile Thr Asp Leu Val 65 70 75 80
- Lys Asn Thr Lys Gly Asn Thr Leu Lys Glu Asp Trp Ile Ala Tyr Ile 85 90 95
- Ser Arg Glu Ile Leu Arg Gly Leu Ala His Leu His Ile His His Val
- Ile His Arg Asp Ile Lys Gly Gln Asn Val Leu Leu Thr Glu Asn Ala 115 120 125
- Glu Val Lys Leu Val Asp Phe Gly Val Ser Ala Gln Leu Asp Arg Thr

Val 145	Gly	Arg	Arg	Asn	Thr 150	Phe	Ile	Gly	Thr	Pro 155	Tyr	Trp	Met	Ala	Pro 160
Glu	Val	Ile	Ala	Cys 165	Asp	Glu	Asn	Pro	Asp 170	Ala	Thr	Tyr	Asp	Tyr 175	Arg
Ser	Asp	Leu	Trp 180	Ser	Cys	Gly	Ile	Thr 185	Ala	Ile	Glu	Met	Ala 190	Glu	Gly
Ala	Pro	Pro 195	Leu	Cys	Asp	Met	His 200	Pro	Met	Arg	Ala	Leu 205	Phe	Leu	Ile
Pro	Arg 210	Asn	Pro	Pro	Pro	Arg 215	Leu	Lys	Ser	Lys	Lys 220	Trp	Ser	Lys	Lys
Phe 225	Phe	Ser	Phe	Ile	Glu 230	Gly	Cys	Leu	Val	Lys 235	Asn	Tyr	Met	Gln	Arg 240
Pro	Ser	Thr	Glu	Gln 245	Leu	Leu	Lys	His	Pro 250	Phe	Ile	Arg	Asp	Gln 255	Pro
Asn	Glu	Arg	Gln 260	Val	Arg	Ile	Gln	Leu 265	Lys	Asp	His	Ile	Asp 270	Arg	Thr
Arg	Lys	Lys 275	Arg	Gly	Glu	Lys	Asp 280	Glu	Thr	Glu	Tyr	Glu 285	Tyr	Ser	Gly
Ser	Glu 290	Glu	Glu	Glu	Glu	Glu 295	Val	Pro	Glu	Gln	Glu 300	Gly	Glu	Pro	Ser
Ser 305	Ile	Val	Asn	Val	Pro 310	Gly	Glu	Ser	Thr	Leu 315	Arg	Arg	Asp	Phe	Leu 320
				325					330					Arg 335	
			340					345					350	Lys	
		355					360					365		Glu	
	370					375					380			Arg	
Gln 385	Gln	Glu	Arg	Glu	Gln 390	Arg	Arg	Arg	Glu	Gln 395	Glu	Glu	Lys	Arg	Arg 400
				405				_	410					Arg 415	
			420					425					430	Ile	
Arg	Gln	Leu	Glu	Glu	Glu	Gln	Arg	His	Leu	Glu	Val	Leu	Gln	Gln	Gln

Leu	Leu 450	Gln	Glu	Gln	Ala	Met 455	Leu	Leu	His	Asp	His 460	Arg	Arg	Pro	His
Pro 465	Gln	His	Ser	Gln	Gln 470	Pro	Pro	Pro	Pro	Gln 475	Gln	Glu	Arg	Ser	Lys 480
Pro	Ser	Phe	His	Ala 485	Pro	Glu	Pro	Lys	Ala 490	His	Tyr	Glu	Pro	Ala 495	Asp
Arg	Ala	Arg	Glu 500	Val	Glu	Asp	Arg	Phe 505	Arg	Lys	Thr	Asn	His 510	Ser	Ser
Pro	Glu	Ala 515	Gln	Ser	Lys	Gln	Thr 520	Gly	Arg	Val	Leu	Glu 525	Pro	Pro	Val
Pro	Ser 530	Arg	Ser	Glu	Ser	Phe 535	Ser	Asn	Gly	Asn	Ser 540	Glu	Ser	Val	His
Pro 545	Ala	Leu	Gln	Arg	Pro 550	Ala	Glu	Pro	Gln	Val 555	Pro	Val	Arg	Thr	Thr 560
Ser	Arg	Ser	Pro	Val 565	Leu	Ser	Arg	Arg	Asp 570	Ser	Pro	Leu	Gln	Gly 575	Ser
Gly	Gln	Gln	Asn 580	Ser	Gln	Ala	Gly	Gln 585	Arg	Asn	Ser	Thr	Ser 590	Ser	Ile
Glu	Pro	Arg 595	Leu	Leu	Trp	Glu	Arg 600	Val	Glu	Lys	Leu	Val 605	Pro	Arg	Pro
Gly	Ser 610	Gly	Ser	Ser	Ser	Gly 615	Ser	Ser	Asn	Ser	Gly 620	Ser	Gln	Pro	Gly
Ser 625	His	Pro	Gly	Ser	Gln 630	Ser	Gly	Ser	Gly	Glu 635	Arg	Phe	Arg	Val	Arg 640
Ser	Ser	Ser	Lys	Ser 645	Glu	Gly	Ser	Pro	Ser 650	Gln	Arg	Leu	Glu	Asn 655	Ala
Val	Lys	Lys	Pro 660	Glu	Asp	Lys	Lys	Glu 665	Val	Phe	Arg	Pro	Leu 670	Lys	Pro
Ala	Gly	Glu 675	Val	Asp	Leu	Thr	Ala 680	Leu	Ala	Lys	Glu	Leu 685	Arg	Ala	Val
Glu	Asp 690	Val	Arg	Pro	Pro	His 695	Lys	Val	Thr	Asp	Tyr 700	Ser	Ser	Ser	Ser
Glu 705	Glu	Ser	Gly	Thr	Thr 710	Asp	Glu	Glu	Asp	Asp 715	Asp	Val	Glu	Gln	Glu 720
Gly	Ala	Asp	Glu	Ser 725	Thr	Ser	Gly	Pro	Glu 730	Asp	Thr	Arg	Ala	Ala 735	Ser
Ser	Leu	Asn	Leu	Ser	Asn	Gly	Glu	Thr	Glu	Ser	Val	Lys	Thr	Met	Ile

- Val His Asp Asp Val Glu Ser Glu Pro Ala Met Thr Pro Ser Lys Glu 755 760 765
- Gly Thr Leu Ile Val Arg Gln Thr Gln Ser Ala Ser Ser Thr Leu Gln
 770 780
- Lys His Lys Ser Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro Arg Leu 785 790 795 800
- Leu Gln Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly 805 810 815
- Phe Ser Cys Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr 820 825 830
- Arg Lys Gly Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln 835 840 845
- Ser Asp Thr Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu 850 855 860
- Ile Leu Cys Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu 865 870 875 880
- Ser Gly Leu Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro 885 890 895
- Leu Ile Asn Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu
 900 905 910
- Asn Val Leu Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr 915 920 925
- Tyr Leu Ser Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val 930 935 940
- Glu Lys Lys Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val 945 950 955 960
- His Tyr Lys Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala 965 970 975
- Leu Lys Ser Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His 980 985 990
- Lys Phe Met Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu 995 1000 . 1005
- Leu Val Asp Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile 1010 1015 1020
- Tyr Gly Ser Cys Ala Gly Phe His Ala Val Asp Val Asp Ser Gly 1025 1030 1035
- Ser Val Tyr Asp Ile Tyr Leu Pro Thr His Ile Gln Cys Ser Ile

1045 1050 1040 Lys Pro His Ala Ile Ile Ile Leu Pro Asn Thr Asp Gly Met Glu 1060 Leu Leu Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr Tyr 1070 1075 1080 Gly Arg Ile Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro 1090 Thr Ser Val Ala Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly 1100 1105 1110 Glu Lys Ala Ile Glu Ile Arg Ser Val Glu Thr Gly His Leu Asp 1115 1120 1125 Gly Val Phe Met His Lys Arg Ala Gln Arg Leu Lys Phe Leu Cys 1135 1140 Glu Arg Asn Asp Lys Val Phe Phe Ala Ser Val Arg Ser Gly Gly 1145 1150 1155 Ser Ser Gln Val Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu Leu 1160 1165 1170 Ser Trp 1175 <210> 226 <211> 1175 <212> PRT <213> Homo sapiens <400> 226 Gln Val Tyr Lys Gly Arg His Val Lys Thr Gly Gln Leu Ala Ala Ile Lys Val Met Asp Val Thr Glu Asp Glu Glu Glu Glu Ile Lys Leu Glu 25 30 20 Ile Asn Met Leu Lys Lys Tyr Ser His His Arg Asn Ile Ala Thr Tyr Tyr Gly Ala Phe Ile Lys Lys Ser Pro Pro Gly His Asp Asp Gln Leu Trp Leu Val Met Glu Phe Cys Gly Ala Gly Ser Ile Thr Asp Leu Val 65 Lys Asn Thr Lys Gly Asn Thr Leu Lys Glu Asp Trp Ile Ala Tyr Ile Ser Arg Glu Ile Leu Arg Gly Leu Ala His Leu His Ile His His Val 105

Ile His Arg Asp Ile Lys Gly Gln Asn Val Leu Leu Thr Glu Asn Ala 115 Glu Val Lys Leu Val Asp Phe Gly Val Ser Ala Gln Leu Asp Arg Thr Val Gly Arg Arg Asn Thr Phe Ile Gly Thr Pro Tyr Trp Met Ala Pro Glu Val Ile Ala Cys Asp Glu Asn Pro Asp Ala Thr Tyr Asp Tyr Arg 170 Ser Asp Leu Trp Ser Cys Gly Ile Thr Ala Ile Glu Met Ala Glu Gly 185 Ala Pro Pro Leu Cys Asp Met His Pro Met Arg Ala Leu Phe Leu Ile 200 Pro Arg Asn Pro Pro Pro Arg Leu Lys Ser Lys Lys Trp Ser Lys Lys 210 Phe Phe Ser Phe Ile Glu Gly Cys Leu Val Lys Asn Tyr Met Gln Arg 235 Pro Ser Thr Glu Gln Leu Leu Lys His Pro Phe Ile Arg Asp Gln Pro Asn Glu Arg Gln Val Arg Ile Gln Leu Lys Asp His Ile Asp Arg Thr Arg Lys Lys Arg Gly Glu Lys Asp Glu Thr Glu Tyr Glu Tyr Ser Gly Ser Glu Glu Glu Glu Glu Val Pro Glu Gln Glu Gly Glu Pro Ser 290 295 Ser Ile Val Asn Val Pro Gly Glu Ser Thr Leu Arg Arg Asp Phe Leu 310 315 Arg Leu Gln Gln Glu Asn Lys Glu Arg Ser Glu Ala Leu Arg Arg Gln 330 335 Gln Leu Leu Gln Glu Gln Leu Arg Glu Gln Glu Glu Tyr Lys Arg Gln Leu Leu Ala Glu Arg Gln Lys Arg Ile Glu Gln Gln Lys Glu Gln 360 Arg Arg Arg Leu Glu Glu Gln Gln Arg Arg Glu Arg Glu Ala Arg Arg 370 Gln Gln Glu Arg Glu Gln Arg Arg Glu Gln Glu Glu Lys Arg Arg Leu Glu Glu Leu Glu Arg Arg Lys Glu Glu Glu Glu Arg Arg Arg

Ala	Glu	Glu	Glu 420	Lys	Arg	Arg	Val	Glu 425	Arg	Glu	Gln	Glu	Tyr 430	Ile	Arg
Arg	Gln	Leu 435	Glu	Glu	Glu	Gln	Arg 440	His	Leu	Glu	Val	Leu 445	Gln	Gln	Gln
Leu	Leu 450	Gln	Glu	Gln	Ala	Met 455	Leu	Leu	His	Asp	His 460	Arg	Arg	Pro	His
Pro 465	Gln	His	Ser	Gln	Gln 470	Pro	Pro	Pro	Pro	Gln 475	Gln	Glu	Arg	Ser	Lys 480
Pro	Ser	Phe	His	Ala 485	Pro	Glu	Pro	Lys	Ala 490	His	Tyr	Glu	Pro	Ala 495	Asp
Arg	Ala	Arg	Glu 500	Val	Glu	Asp	Arg	Phe 505	Arg	Lys	Thr	Asn	His 510	Ser	Ser
Pro	Glu	Ala 515	Gln	Ser	Lys	Gln	Thr 520	Gly	Arg	Val	Leu	Glu 525	Pro	Pro	Val
Pro	Ser 530	Arg	Ser	Glu	Ser	Phe 535	Ser	Asn	Gly	Asn	Ser 540	Glu	Ser	Val	His
Pro 545	Ala	Leu	Gln	Arg	Pro 550		Glu	Pro	Gln	Val 555	Pro	Val	Arg	Thr	Thr 560
Ser	Arg	Ser	Pro	Val 565	Leu	Ser	Arg	Arg	Asp 570	Ser	Pro	Leu	Gln	Gly 575	Ser
Gly	Gln	Gln	Asn 580	Ser	Gln	Ala	Gly	Gln 585	Arg	Asn	Ser	Thr	Ser 590	Ser	Ile
Glu	Pro	Arg 595	Leu	Leu	Trp	Glu	Arg 600	Val	Glu	Lys	Leu	Val 605	Pro	Arg	Pro
Gly	Ser 610	Gly	Ser	Ser	Ser	Gly 615	Ser	Ser	Asn	Ser	Gly 620	Ser	Gln	Pro	Gly
Ser 625	His	Pro	Gly	Ser	Gln 630	Ser	Gly	Ser	Gly	Glu 635	Arg	Phe	Arg	Val	Arg 640
Ser	Ser	Ser	Lys	Ser 645	Glu	Gly	Ser	Pro	Ser 650	Gln	Arg	Leu	Glu	Asn 655	Ala
Val	Lys	Lys	Pro 660	Glu	Asp	Lys	Lys	Glu 665	Val	Phe	Arg	Pro	Leu 670	Lys	Pro
Ala	Gly	Glu 675	Val	Asp	Leu	Thr	Ala 680	Leu	Ala	Lys	Glu	Leu 685	Arg	Ala	Val
Glu	Asp 690	Val	Arg	Pro	Pro	His 695	Lys	Val	Thr	Asp	Tyr 700	Ser	Ser	Ser	Ser
Glu 705	Glu	Ser	Gly	Thr	Thr 710	Asp	Glu	Glu	Asp	Asp 715	Asp	Val	Glu	Gln	Glu 720

- Gly Ala Asp Glu Ser Thr Ser Gly Pro Glu Asp Thr Arg Ala Ala Ser 725 730 735
- Ser Leu Asn Leu Ser Asn Gly Glu Thr Glu Ser Val Lys Thr Met Ile 740 745 750
- Val His Asp Asp Val Glu Ser Glu Pro Ala Met Thr Pro Ser Lys Glu 755 760 765
- Gly Thr Leu Ile Val Arg Gln Thr Gln Ser Ala Ser Ser Thr Leu Gln 770 775 780
- Lys His Lys Ser Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro Arg Leu 785 790 795 800
- Leu Gln Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly 805 810 815
- Phe Ser Cys Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr 820 825 830
- Arg Lys Gly Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln 835 840 845
- Ser Asp Thr Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu 850 855 860
- Ile Leu Cys Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu 865 870 875 880
- Ser Gly Leu Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro 885 890 895
- Leu Ile Asn Arg Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu
 900 905 910
- Asn Val Leu Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr 915 920 925
- Tyr Leu Ser Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val 930 935 940
- Glu Lys Lys Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val 945 950 955 960
- His Tyr Lys Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala 965 970 975
- Leu Lys Ser Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His 980 985 990
- Lys Phe Met Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu 995 1000 1005
- Leu Val Asp Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile 1010 1015 1020

- Tyr Gly Ser Cys Ala Gly Phe His Ala Val Asp Val Asp Ser Gly 1025 1030 1035
- Ser Val Tyr Asp Ile Tyr Leu Pro Thr His Ile Gln Cys Ser Ile 1040 1045 1050
- Lys Pro His Ala Ile Ile Ile Leu Pro Asn Thr Asp Gly Met Glu 1055 1060 1065
- Leu Leu Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr Tyr 1070 1075 1080
- Gly Arg Ile Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro 1085 1090 1095
- Thr Ser Val Ala Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly 1100 1105 1110
- Glu Lys Ala Ile Glu Ile Arg Ser Val Glu Thr Gly His Leu Asp 1115 1120 1125
- Gly Val Phe Met His Lys Arg Ala Gln Arg Leu Lys Phe Leu Cys 1130 1135 1140
- Glu Arg Asn Asp Lys Val Phe Phe Ala Ser Val Arg Ser Gly Gly 1145 1150 1155
- Ser Ser Gln Val Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu Leu 1160 1165 1170

Ser Trp 1175

<210> 227

<211> 983

<212> PRT

<213> Homo sapiens

<400> 227

- Met Asp Cys Gln Leu Ser Ile Leu Leu Leu Leu Ser Cys Ser Val Leu 1 5 10 15
- Asp Ser Phe Gly Glu Leu Ile Pro Gln Pro Ser Asn Glu Val Asn Leu 20 25 30
- Leu Asp Ser Lys Thr Ile Gln Gly Glu Leu Gly Trp Ile Ser Tyr Pro 35 40 45
- Ser His Gly Trp Glu Glu Ile Ser Gly Val Asp Glu His Tyr Thr Pro 50 55 60
- Ile Arg Thr Tyr Gln Val Cys Asn Val Met Asp His Ser Gln Asn Asn 65 70 75 80
- Trp Leu Arg Thr Asn Trp Val Pro Arg Asn Ser Ala Gln Lys Ile Tyr 85 90 95

- Val Glu Leu Lys Phe Thr Leu Arg Asp Cys Asn Ser Ile Pro Leu Val 100 105 110
- Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu Tyr Tyr Met Glu Ser Asp 115 120 125
- Asp Asp His Gly Val Lys Phe Arg Glu His Gln Phe Thr Lys Ile Asp 130 135 140
- Thr Ile Ala Ala Asp Glu Ser Phe Thr Gln Met Asp Leu Gly Asp Arg 145 150 155 160
- Ile Leu Lys Leu Asn Thr Glu Ile Arg Glu Val Gly Pro Val Asn Lys
 165 170 175
- Lys Gly Phe Tyr Leu Ala Phe Gln Asp Val Gly Ala Cys Val Ala Leu 180 185 190
- Val Ser Val Arg Val Tyr Phe Lys Lys Cys Pro Phe Thr Val Lys Asn 195 200 205
- Leu Ala Met Phe Pro Asp Thr Val Pro Met Asp Ser Gln Ser Leu Val 210 215 220
- Glu Val Arg Gly Ser Cys Val Asn Asn Ser Lys Glu Glu Asp Pro Pro 225 230 235 240
- Arg Met Tyr Cys Ser Thr Glu Gly Glu Trp Leu Val Pro Ile Gly Lys 245 250 255
- Cys Ser Cys Asn Ala Gly Tyr Glu Glu Arg Gly Phe Met Cys Gln Ala 260 265 270
- Cys Arg Pro Gly Phe Tyr Lys Ala Leu Asp Gly Asn Met Lys Cys Ala 275 280 285
- Lys Cys Pro Pro His Ser Ser Thr Gln Glu Asp Gly Ser Met Asn Cys 290 295 300
- Arg Cys Glu Asn Asn Tyr Phe Arg Ala Asp Lys Asp Pro Pro Ser Met 305 310 315 320
- Ala Cys Thr Arg Pro Pro Ser Ser Pro Arg Asn Val Ile Ser Asn Ile 325 330 335
- Asn Glu Thr Ser Val Ile Leu Asp Trp Ser Trp Pro Leu Asp Thr Gly 340 345 350
- Gly Arg Lys Asp Val Thr Phe Asn Ile Ile Cys Lys Lys Cys Gly Trp 355 360 365
- Asn Ile Lys Gln Cys Glu Pro Cys Ser Pro Asn Val Arg Phe Leu Pro 370 375 380
- Arg Gln Phe Gly Leu Thr Asn Thr Thr Val Thr Val Thr Asp Leu Leu 385 390 395 400

Ala	His	Thr	Asn	Tyr 405	Thr	Phe	Glu	Ile	Asp 410	Ala	Val	Asn	Gly	Val 415	Ser
Glu	Leu	Ser	Ser 420	Pro	Pro	Arg	Gln	Phe 425	Ala	Ala	Val	Ser	Ile 430	Thr	Thr
Asn	Gln	Ala 435	Ala	Pro	Ser	Pro	Val 440	Leu	Thr	Ile	Lys	Lys 445	Asp	Arg	Thr
Ser	Arg 450	Asn	Ser	Ile	Ser	Leu 455	Ser	Trp	Gln	Glu	Pro 460	Glu	His	Pro	Asr
Gly 465	Ile	Ile	Leu	Asp	Tyr 470	Glu	Val	Lys	Tyr	Tyr 475	Glu	Lys	Gln	Glu	Glr 480
Glu	Thr	Ser	Tyr	Thr 485	Ile	Leu	Arg	Ala	Arg 490	Gly	Thr	Asn	Val	Thr 495	Ile
Ser	Ser	Leu	Lys 500	Pro	Asp	Thr	Ile	Tyr 505	Val	Phe	Gln	Ile	Arg 510	Ala	Arg
Thr	Ala	Ala 515	Gly	Tyr	Gly	Thr	Asn 520	Ser	Arg	Lys	Phe	Glu 525	Phe	Glu	Thi
Ser	Pro 530	Asp	Ser	Phe	Ser	Ile 535	Ser	Gly	Glu	Ser	Ser 540	Gln	Val	Val	Met
Ile 545	Ala	Ile	Ser	Ala	Ala 550	Val	Ala	Ile	Ile	Leu 555	Leu	Thr	Val	Val	11e
Tyr	Val	Leu	Ile	Gly 565	Arg	Phe	Cys	Gly	Tyr 570	Lys	Ser	Lys	His	Gly 575	Ala
Asp	Glu	Lys	Arg 580	Leu	His	Phe	Gly	Asn 585	Gly	His	Leu	Lys	Leu 590	Pro	Gly
Leu	Arg	Thr 595	Tyr	Val	Asp	Pro	His 600	Thr	Tyr	Glu	Asp	Pro 605	Thr	Gln	Ala
Val	His 610	Glu	Phe	Ala	Lys	Glu 615	Leu	Asp	Ala	Thr	Asn 620	Ile	Ser	Ile	Asp
Lys 625	Val	Val	Gly	Ala	Gly 630	Glu	Phe	Gly	Glu	Val 635	Cys	Ser	Gly	Arg	Le: 640
Lys	Leu	Pro	Ser	Lys 645	Lys	Glu	Ile	Ser	Val 650	Ala	Ile	Lys	Thr	Leu 655	Lys
Val	Gly	Tyr	Thr 660	Glu	Lys	Gln	Arg	Arg 665	Asp	Phe	Leu	Gly	Glu 670	Ala	Se
Ile	Met	Gly 675	Gln	Phe	Asp	His	Pro 680	Asn	Ile	Ile	Arg	Leu 685	Glu	Gly	Va:
Val	Thr 690	Lys	Ser	Lys	Pro	Val 695	Met	Ile	Val	Thr	Glu 700	Tyr	Met	Glu	Ası

Gly Ser Leu Asp Ser Phe Leu Arg Lys His Asp Ala Gln Phe Thr Val
705 710 715 720

Ile Gln Leu Val Gly Met Leu Arg Gly Ile Ala Ser Gly Met Lys Tyr
725 730 735

Leu Ser Asp Met Gly Tyr Val His Arg Asp Leu Ala Ala Arg Asn Ile 740 745 750

Leu Ile Asn Ser Asn Leu Val Cys Lys Val Ser Asp Phe Gly Leu Ser 755 760 765

Arg Val Leu Glu Asp Asp Pro Glu Ala Ala Tyr Thr Thr Arg Gly Gly 770 775 780

Lys Ile Pro Ile Arg Trp Thr Ser Pro Glu Ala Ile Ala Tyr Arg Lys 785 790 795 800

Phe Thr Ser Ala Ser Asp Val Trp Ser Tyr Gly Ile Val Leu Trp Glu 805 810 815

Val Met Ser Tyr Gly Glu Arg Pro Tyr Trp Glu Met Ser Asn Gln Asp 820 825 830

Val Ile Lys Ala Val Asp Glu Gly Tyr Arg Leu Pro Pro Met Asp 835 840 845

Cys Pro Ala Ala Leu Tyr Gln Leu Met Leu Asp Cys Trp Gln Lys Asp 850 860

Arg Asn Asn Arg Pro Lys Phe Glu Gln Ile Val Ser Ile Leu Asp Lys 865 870 875 880

Leu Ile Arg Asn Pro Gly Ser Leu Lys Ile Ile Thr Ser Ala Ala Ala 885 890 895

Arg Pro Ser Asn Leu Leu Leu Asp Gln Ser Asn Val Asp Ile Ser Thr 900 905 910

Phe Arg Thr Thr Gly Asp Trp Leu Asn Gly Val Arg Thr Ala His Cys 915 920 925

Lys Glu Ile Phe Thr Gly Val Glu Tyr Ser Ser Cys Asp Thr Ile Ala 930 935 940

Lys Ile Ser Thr Asp Asp Met Lys Lys Val Gly Val Thr Val Val Gly 945 950 955 960

Pro Gln Lys Lys Ile Ile Ser Ser Ile Lys Ala Leu Glu Thr Gln Ser 965 970 975

Lys Asn Gly Pro Val Pro Val 980

<210> 228 <211> 496

<212> PRT

<213> Homo sapiens

<400> 228

Met Ser Gly Glu Val Arg Leu Arg Gln Leu Glu Gln Phe Ile Leu Asp 1 5 10 15

Gly Pro Ala Gln Thr Asn Gly Gln Tyr Phe Ser Val Glu Thr Leu Leu 20 25 30

Asp Ile Leu Ile Cys Leu Tyr Asp Glu Cys Asn Asn Ser Pro Leu Arg 35 40 45

Arg Glu Lys Asn Ile Leu Glu Tyr Leu Glu Trp Ala Lys Pro Phe Thr 50 55 60

Ser Lys Val Lys Gln Met Arg Leu His Arg Glu Asp Phe Glu Ile Leu 65 70 75 80

Lys Val Ile Gly Arg Gly Ala Phe Gly Glu Val Ala Val Val Lys Leu 85 90 95

Lys Asn Ala Asp Lys Val Phe Ala Met Lys Ile Leu Asn Lys Trp Glu
100 105 110

Met Leu Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val 115 120 125

Leu Val Asn Gly Asp Asn Lys Trp Ile Thr Thr Leu His Tyr Ala Phe 130 135 140

Gln Asp Asp Asn Asn Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly 145 150 155 160

Asp Leu Leu Thr Leu Leu Ser Lys Phe Glu Asp Arg Leu Pro Glu Asp 165 170 175

Met Ala Arg Phe Tyr Leu Ala Glu Met Val Ile Ala Ile Asp Ser Val 180 185 190

His Gln Leu His Tyr Val His Arg Asp Ile Lys Pro Asp Asn Ile Leu 195 200 205

Met Asp Met Asn Gly His Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu 210 215 220

Lys Leu Met Glu Asp Gly Thr Val Gln Ser Ser Val Ala Val Gly Thr 225 230 235 240

Pro Asp Tyr Ile Ser Pro Glu Ile Leu Gln Ala Met Glu Asp Gly Lys 245 250 255

Gly Arg Tyr Gly Pro Glu Cys Asp Trp Trp Ser Leu Gly Val Cys Met 260 265 270

Tyr Glu Met Leu Tyr Gly Glu Thr Pro Phe Tyr Ala Glu Ser Leu Val

275 280 285

Glu Thr Tyr Gly Lys Ile Met Asn His Lys Glu Arg Phe Gln Phe Pro 295 Ala Gln Val Thr Asp Val Ser Glu Asn Ala Lys Asp Leu Ile Arg Arg 310 315 Leu Ile Cys Ser Arg Glu His Arg Leu Gly Gln Asn Gly Ile Glu Asp 330 Phe Lys Lys His Pro Phe Phe Ser Gly Ile Asp Trp Asp Asn Ile Arg 340 Asn Cys Glu Ala Pro Tyr Ile Pro Glu Val Ser Ser Pro Thr Asp Thr 360 Ser Asn Phe Asp Val Asp Asp Cys Leu Lys Asn Ser Glu Thr Met 375 Pro Pro Pro Thr His Thr Ala Phe Ser Gly His His Leu Pro Phe Val 385 390 Gly Phe Thr Tyr Thr Ser Ser Cys Val Leu Ser Asp Arg Ser Cys Leu 410 Arg Val Thr Ala Gly Pro Thr Ser Leu Asp Leu Asp Val Asn Val Gln Arg Thr Leu Asp Asn Asn Leu Ala Thr Glu Ala Tyr Glu Arg Arg Ile Lys Arg Leu Glu Gln Glu Lys Leu Glu Leu Ser Arg Lys Leu Gln Glu 455 Ser Thr Gln Thr Val Gln Ala Leu Gln Tyr Ser Thr Val Asp Gly Pro 465 (470 475 Leu Thr Ala Ser Lys Asp Leu Glu Ile Lys Asn Leu Lys Glu Glu Ile 490 495 485 <210> 229 <211> 433 <212> PRT <213> Homo sapiens <400> 229 Met Glu Val Val Asp Pro Gln Gln Leu Gly Met Phe Thr Glu Gly Glu 5 Leu Met Ser Val Gly Met Asp Thr Phe Ile His Arg Ile Asp Ser Thr

Glu Val Ile Tyr Gln Pro Arg Arg Lys Arg Ala Lys Leu Ile Gly Lys 35 40 45

Tyr	Leu 50	Met	Gly	Asp	Leu	Leu 55	Gly	Glu	Gly	Ser	Tyr 60	Gly	Lys	Val	Lys
Glu 65	Val	Leu	Asp	Ser	Glu 70	Thr	Leu	Cys	Arg	Arg 75	Ala	Val	Lys	Ile	Leu 80
Lys	Lys	Lys	Lys	Leu 85	Arg	Arg	Ile	Pro	Asn 90	Gly	Glu	Ala	Asn	Val 95	Lys
Lys	Glu	Ile	Gln 100	Leu	Leu	Arg	Arg	Leu 105	Arg	His	Lys	Asn	Val 110	Ile	Gln
Leu	Val	Asp 115	Val	Leu	Tyr	Asn	Glu 120	Glu	Lys	Gln	Lys	Met 125	Tyr	Met	Val
Met	Glu 130	Tyr	Cys	Val	Cys	Gly 135	Met	Gln	Glu	Met	Leu 140	Asp	Ser	Val	Pro
Glu 145	Lys	Arg	Phe	Pro	Val 150	Cys	Gln	Ala	His	Gly 155	Tyr	Phe	Cys	Gln	Leu 160
Ile	Asp	Gly	Leu	Glu 165	Tyr	Leu	His	Ser	Gln 170	Gly	Ile	Val	His	Lys 175	-
Ile	Lys	Pro	Gly 180	Asn	Leu	Leu	Leu	Thr 185	Thr	Gly	Gly	Thr	Leu 190	Lys	Ile
Ser	Asp	Leu 195	Gly	Val	Ala	Glu	Ala 200	Leu	His	Pro	Phe	Ala 205	Ala	Asp	Asp
Thr	Cys 210	Arg	Thr	Ser	Gln	Gly 215	Ser	Pro	Ala	Phe	Gln 220	Pro	Pro	Glu	Ile
Ala 225	Asn	Gly	Leu	Asp	Thr 230	Phe	Ser	Gly	Phe	Lys 235	Val	Asp	Ile	Trp	Ser 240
Ala	Gly	Val	Thr	Leu 245	Tyr	Asn	Ile	Thr	Thr 250	Gly	Leu	Tyr	Pro	Phe 255	Glu
Gly	Asp	Asn	Ile 260	Tyr	Lys	Leu	Phe	Glu 265	Asn	Ile	Gly	Lys	Gly 270	Ser	Tyr
Ala	Ile	Pro 275	Gly	Asp	Cys	Gly	Pro 280	Pro	Leu	Ser	Asp	Leu 285	Leu	Lys	Gly
Met	Leu 290	Glu	Tyr	Glu	Pro	Ala 295	Lys	Arg	Phe	Ser	Ile 300	Arg	Gln	Ile	Arg
Gln 305	His	Ser	Trp	Phe	Arg 310	Lys	Lys	His	Pro	Pro 315	Ala	Glu	Ala	Pro	Val 320
Pro	Ile	Pro	Pro	Ser 325	Pro	Asp	Thr	Lys	Asp 330	Arg	Trp	Arg	Ser	Met 335	Thr
Val	Val	Pro	Tyr 340	Leu	Glu	Asp	Leu	His	Gly	Ala	Asp	Glu	Asp	Glu	Asp

Leu Phe Asp Ile Glu Asp Asp Ile Ile Tyr Thr Gln Asp Phe Thr Val 355 360 365

Pro Gly Gln Val Pro Glu Glu Glu Ala Ser His Asn Gly Gln Arg Arg 370 375 380

Gly Leu Pro Lys Ala Val Cys Met Asn Gly Thr Glu Ala Ala Gln Leu 385 390 395 400

Ser Thr Lys Ser Arg Ala Glu Gly Arg Ala Pro Asn Pro Ala Arg Lys
405
410
415

Ala Cys Ser Ala Ser Ser Lys Ile Arg Arg Leu Ser Ala Cys Lys Gln
420 425 430

Gln

<210> 230

<211> 433

<212> PRT

<213> Homo sapiens

<400> 230

Met Glu Val Val Asp Pro Gln Gln Leu Gly Met Phe Thr Glu Gly Glu
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Leu Met Ser Val Gly Met Asp Thr Phe Ile His Arg Ile Asp Ser Thr
20 25 30

Glu Val Ile Tyr Gln Pro Arg Arg Lys Arg Ala Lys Leu Ile Gly Lys 35 40 45

Tyr Leu Met Gly Asp Leu Leu Gly Glu Gly Ser Tyr Gly Lys Val Lys 50 55 60

Glu Val Leu Asp Ser Glu Thr Leu Cys Arg Arg Ala Val Lys Ile Leu 65 70 75 80

Lys Lys Lys Leu Arg Arg Ile Pro Asn Gly Glu Ala Asn Val Lys 85 90 95

Lys Glu Ile Gln Leu Leu Arg Arg Leu Arg His Lys Asn Val Ile Gln
100 105 110

Leu Val Asp Val Leu Tyr Asn Glu Glu Lys Gln Lys Met Tyr Met Val 115 120 125

Met Glu Tyr Cys Val Cys Gly Met Gln Glu Met Leu Asp Ser Val Pro 130 135 140

Glu Lys Arg Phe Pro Val Cys Gln Ala His Gly Tyr Phe Cys Gln Leu 145 150 155 160

Ile Asp Gly Leu Glu Tyr Leu His Ser Gln Gly Ile Val His Lys Asp 165 170 175 Ile Lys Pro Gly Asn Leu Leu Thr Thr Gly Gly Thr Leu Lys Ile Ser Asp Leu Gly Val Ala Glu Ala Leu His Pro Phe Ala Ala Asp Asp Thr Cys Arg Thr Ser Gln Gly Ser Pro Ala Phe Gln Pro Pro Glu Ile Ala Asn Gly Leu Asp Thr Phe Ser Gly Phe Lys Val Asp Ile Trp Ser Ala Gly Val Thr Leu Tyr Asn Ile Thr Thr Gly Leu Tyr Pro Phe Glu Gly Asp Asn Ile Tyr Lys Leu Phe Glu Asn Ile Gly Lys Gly Ser Tyr Ala Ile Pro Gly Asp Cys Gly Pro Pro Leu Ser Asp Leu Leu Lys Gly 280 Met Leu Glu Tyr Glu Pro Ala Lys Arg Phe Ser Ile Arg Gln Ile Arg Gln His Ser Trp Phe Arg Lys Lys His Pro Pro Ala Glu Ala Pro Val 315 Pro Ile Pro Pro Ser Pro Asp Thr Lys Asp Arg Trp Arg Ser Met Thr 330 Val Val Pro Tyr Leu Glu Asp Leu His Gly Ala Asp Glu Asp Glu Asp 340 345 Leu Phe Asp Ile Glu Asp Asp Ile Ile Tyr Thr Gln Asp Phe Thr Val Pro Gly Gln Val Pro Glu Glu Glu Ala Ser His Asn Gly Gln Arg Arg 370 Gly Leu Pro Lys Ala Val Cys Met Asn Gly Thr Glu Ala Ala Gln Leu 390 Ser Thr Lys Ser Arg Ala Glu Gly Arg Ala Pro Asn Pro Ala Arg Lys 410 Ala Cys Ser Ala Ser Ser Lys Ile Arg Arg Leu Ser Ala Cys Lys Gln

425

430

Gln

<210> 231

<211> 518

<212> PRT

<213> Homo sapiens

420

- Met Ser Cys Val Lys Leu Trp Pro Ser Gly Ala Pro Ala Pro Leu Val 1 5 10 15
- Ser Ile Glu Glu Leu Glu Asn Gln Glu Leu Val Gly Lys Asp Gly Phe 20 25 30
- Gly Thr Val Phe Arg Ala Gln His Arg Lys Trp Gly Tyr Asp Val Ala 35 40 45
- Val Lys Ile Val Asn Ser Lys Ala Ile Ser Arg Glu Val Lys Ala Met 50 55 60
- Ala Ser Leu Asp Asn Glu Phe Val Leu Arg Leu Glu Gly Val Ile Glu 65 70 75 80
- Lys Val Asn Trp Asp Gln Asp Pro Lys Pro Ala Leu Val Thr Lys Phe 85 90 95
- Met Glu Asn Gly Ser Leu Ser Gly Leu Leu Gln Ser Gln Cys Pro Arg 100 105 110
- Pro Trp Pro Leu Leu Cys Arg Leu Leu Lys Glu Val Val Leu Gly Met 115 120 125
- Phe Tyr Leu His Asp Gln Asn Pro Val Leu Leu His Arg Asp Leu Lys 130 135 140
- Pro Ser Asn Val Leu Pro Asp Pro Glu Leu His Val Lys Leu Ala Asp 145 150 155 160
- Phe Gly Leu Ser Thr Phe Gln Gly Gly Ser Gln Ser Gly Thr Gly Ser 165 170 175
- Gly Glu Pro Gly Gly Thr Leu Gly Tyr Leu Ala Pro Glu Leu Phe Val 180 185 190
- Asn Val Asn Arg Lys Ala Ser Thr Ala Ser Asp Val Tyr Ser Phe Gly
 195 200 205
- Ile Leu Met Trp Ala Val Leu Ala Gly Arg Glu Val Glu Leu Pro Thr 210 215 220
- Glu Pro Ser Leu Val Tyr Glu Ala Val Cys Asn Arg Gln Asn Arg Pro 225 230 235 240
- Ser Leu Ala Glu Leu Pro Gln Ala Gly Pro Glu Thr Pro Gly Leu Glu 245 250 255
- Gly Leu Lys Glu Leu Met Gln Leu Cys Trp Ser Ser Glu Pro Lys Asp 260 265 270
- Arg Pro Ser Phe Gln Glu Cys Leu Pro Lys Thr Asp Glu Val Phe Gln 275 280 285
- Met Val Glu Asn Asn Met Asn Ala Ala Val Ser Thr Val Lys Asp Phe

Leu Ser Gln Leu Lys Ser Ser Asn Arg Arg Phe Ser Ile Pro Glu Ser 305 310 315 320

Gly Gln Gly Gly Thr Glu Met Asp Gly Phe Arg Arg Thr Ile Glu Asn 325 330 335

Gln His Ser Arg Asn Asp Val Met Val Ser Glu Trp Leu Asn Lys Leu 340 345 350

Asn Leu Glu Glu Pro Pro Ser Ser Val Pro Lys Lys Cys Pro Ser Leu 355 360 365

Thr Lys Arg Ser Arg Ala Gln Glu Glu Gln Val Pro Gln Ala Trp Thr 370 375 380

Ala Gly Thr Ser Ser Asp Ser Met Ala Gln Pro Pro Gln Thr Pro Glu 385 390 395 400

Thr Ser Thr Phe Arg Asn Gln Met Pro Ser Pro Thr Ser Thr Gly Thr
405 410 415

Pro Ser Pro Gly Pro Arg Gly Asn Gln Gly Ala Glu Arg Gln Gly Met
420 425 430

Asn Trp Ser Cys Arg Thr Pro Glu Pro Asn Pro Val Thr Gly Arg Pro 435 440 445

Leu Val Asn Ile Tyr Asn Cys Ser Gly Val Gln Val Gly Asp Asn Asn 450 455 460

Tyr Leu Thr Met Gln Gln Thr Thr Ala Leu Pro Thr Trp Gly Leu Ala 465 470 475 480

Pro Ser Gly Lys Gly Arg Gly Leu Gln His Pro Pro Pro Val Gly Ser 485 490 495

Gln Glu Gly Pro Lys Asp Pro Glu Ala Trp Ser Arg Pro Gln Gly Trp
500 505 510

Tyr Asn His Ser Gly Lys

<210> 232

<211> 756

<212> PRT

<213> Homo sapiens

<400> 232

Met Ser Trp Ser Pro Ser Leu Thr Thr Gln Thr Cys Gly Ala Trp Glu

1 10 15

Met Lys Glu Arg Leu Gly Thr Gly Gly Phe Gly Asn Val Ile Arg Trp
20 25 30

His	Asn	Gln 35	Glu	Thr	Gly	Glu	Gln 40	Ile	Ala	Ile	Lys	GIn 45	Cys	Arg	Gin
Glu	Leu 50	Ser	Pro	Arg	Asn	Arg 55	Glu	Arg	Trp	Cys	Leu 60	Glu	Ile	Gln	Ile
Met 65	Arg	Arg	Leu	Thr	His 70	Pro	Asn	Val	Val	Ala 75	Ala	Arg	Asp	Val	Pro 80
Glu	Gly	Met	Gln	Asn 85	Leu	Ala	Pro	Asn	Asp 90	Leu	Pro	Leu	Leu	Ala 95	Met
Glu	Tyr	Cys	Gln 100	Gly	Gly	Asp	Leu	Arg 105	Lys	Tyr	Leu	Asn	Gln 110	Phe	Glu
Asn	Cys	Cys 115	Gly	Leu	Arg	Glu	Gly 120	Ala	Ile	Leu	Thr	Leu 125	Leu	Ser	Asp
Ile	Ala 130	Ser	Ala	Leu	Arg	Tyr 135	Leu	His	Glu	Asn	Arg 140	Ile	Ile	His	Arg
Asp 145	Leu	Lys	Pro	Glu	Asn 150	Ile	Val	Leu	Gln	Gln 155	Gly	Glu	Gln	Arg	Leu 160
Ile	His	Lys	Ile	Ile 165	Asp	Leu	Gly	Tyr	Ala 170	Lys	Glu	Leu	Asp	Gln 175	Gly
Ser	Leu	Cys	Thr 180	Ser	Phe	Val	Gly	Thr 185	Leu	Gln	Tyr	Leu	Ala 190	Pro	Glu
Leu	Leu	Glu 195	Gln	Gln	Lys	Tyr	Thr 200	Val	Thr	Val	Asp	Tyr 205	Trp	Ser	Phe
Gly	Thr 210	Leu	Ala	Phe	Glu	Cys 215	Ile	Thr	Gly	Phe	Arg 220	Pro	Phe	Leu	Pro
Asn 225	Trp	Gln	Pro	Val	Gln 230	Trp	His	Ser	Lys	Val 235	Arg	Gln	Lys	Ser	Glu 240
Val	Asp	Ile	Val	Val 245	Ser	Glu	Asp	Leu	Asn 250	Gly	Thr	Val	Lys	Phe 255	Ser
Ser	Ser	Leu	Pro 260	Tyr	Pro	Asn	Asn	Leu 265	Asn	Ser	Val	Leu	Ala 270	Glu	Arg
Leu	Glu	Lys 275	Trp	Leu	Gln	Leu	Met 280	Leu	Met	Trp	His	Pro 285	Arg	Gln	Arg
Gly	Thr 290	Asp	Pro	Thr	Tyr	Gly 295	Pro	Asn	Gly	Cys	Phe 300	Lys	Ala	Leu	Asp
Asp 305	Ile	Leu	Asn	Leu	Lys 310		Val	His	Ile	Leu 315	Asn	Met	Val	Thr	Gly 320
Thr	Ile	His	Thr	Tyr 325	Pro	Val	Thr	Glu	Asp 330	Glu	Ser	Leu	Gln	Ser 335	Leu

Lys	Ala	Arg	Ile 340	Gln	Gln	Asp	Thr	Gly 345	Ile	Pro	Glu	Glu	Asp 350	Gln	Glu
Leu	Leu	Gln 355	Glu	Ala	Gly	Leu	Ala 360	Leu	Ile	Pro	Asp	Lys 365	Pro	Ala	Thr
Gln	Cys 370	Ile	Ser	Asp	Gly	Lys 375	Leu	Asn	Glu	Gly	His 380	Thr	Leu	Asp	Met
Asp 385	Leu	Val	Phe	Leu	Phe 390	Asp	Asn	Ser	Lys	Ile 395	Thr	Tyr	Glu	Thr	Gln 400
Ile	Ser	Pro	Arg	Pro 405	Gln	Pro	Glu	Ser	Val 410	Ser	Cys	Ile	Leu	Gln 415	Glu
Pro	Lys	Arg	Asn 420	Leu	Ala	Phe	Phe	Gln 425	Leu	Arg	Lys	Val	Trp 430	Gly	Gln
Val	Trp	His 435	Ser	Ile	Gln	Thr	Leu 440	Lys	Glu	Asp	Cys	Asn 445	Arg	Leu	Gln
Gln	Gly 450	Gln	Arg	Ala	Ala	Met 455	Met	Asn	Leu	Leu	Arg 460	Asn	Asn	Ser	Cys
Leu 465	Ser	Lys	Met	Lys	Asn 470	Ser	Met	Ala	Ser	Met 475	Ser	Gln	Gln	Leu	Lys 480
Ala	Lys	Leu	Asp	Phe 485	Phe	Lys	Thr	Ser	Ile 490	Gln	Ile	Asp	Leu	Glu 495	Lys
Tyr	Ser	Glu	Gln 500	Thr	Glu	Phe	Gly	Ile 505	Thr	Ser	Asp	Lys	Leu 510	Leu	Leu
Ala	Trp	Arg 515	Glu	Met	Glu	Gln	Ala 520	Val	Glu	Leu	Cys	Gly 525	Arg	Glu	Asn
Glu	Val 530	Lys	Leu	Leu	Val	Glu 535	Arg	Met	Met	Ala	Leu 540	Gln	Thr	Asp	Ile
Val 545	Asp	Leu	Gln	Arg	Ser 550	Pro	Met	Gly	Arg	Lys 555	Gln	Gly	Gly	Thr	Leu 560
Asp	Asp	Leu	Glu	Glu 565	Gln	Ala	Arg	Glu	Leu 570	Tyr	Arg	Arg	Leu	Arg 575	Glu
Lys	Pro	Arg	Asp 580	Gln	Arg	Thr	Glu	Gly 585	Asp	Ser	Gln	Glu	Met 590	Val	Arg
Leu	Leu	Leu 595	Gln	Ala	Ile	Gln	Ser 600	Phe	Glu	Lys	Lys	Val 605	Arg	Val	Ile
Tyr	Thr 610	Gln	Leu	Ser	Lys	Thr 615	Val	Val	Cys	Lys	Gln 620	Lys	Ala	Leu	Glu
Leu 625	Leu	Pro	Lys	Val	Glu 630	Glu	Val	Val	Ser	Leu 635	Met	Asn	Glu	Asp	Glu 640

Lys Thr Val Val Arq Leu Gln Glu Lys Arq Gln Lys Glu Leu Trp Asn Leu Leu Lys Ile Ala Cys Ser Lys Val Arg Gly Pro Val Ser Gly Ser Pro Asp Ser Met Asn Ala Ser Arg Leu Ser Gln Pro Gly Gln Leu Met Ser Gln Pro Ser Thr Ala Ser Asn Ser Leu Pro Glu Pro Ala Lys Lys Ser Glu Glu Leu Val Ala Glu Ala His Asn Leu Cys Thr Leu Leu Glu 715 Asn Ala Ile Gln Asp Thr Val Arg Glu Gln Asp Gln Ser Phe Thr Ala 730 Leu Asp Trp Ser Trp Leu Gln Thr Glu Glu Glu His Ser Cys Leu 740 745 Glu Gln Ala Ser 755 <210> 233 <211> 647 <212> PRT <213> Homo sapiens <400> 233 Met Arg Leu Thr Leu Leu Cys Cys Thr Trp Arg Glu Glu Arg Met Gly Glu Glu Gly Ser Glu Leu Pro Val Cys Ala Ser Cys Gly Gln Arg Ile Tyr Asp Gly Gln Tyr Leu Gln Ala Leu Asn Ala Asp Trp His Ala Asp Cys Phe Arg Cys Cys Asp Cys Ser Ala Ser Leu Ser His Gln Tyr Tyr Glu Lys Asp Gly Gln Leu Phe Cys Lys Lys Asp Tyr Trp Ala Arg Tyr 75 Gly Glu Ser Cys His Gly Cys Ser Glu Gln Ile Thr Lys Gly Leu Val Met Val Ala Gly Glu Leu Lys Tyr His Pro Glu Cys Phe Ile Cys Leu 105 Thr Cys Gly Thr Phe Ile Gly Asp Gly Asp Thr Tyr Thr Leu Val Glu 115 120 His Ser Lys Leu Tyr Cys Gly His Cys Tyr Tyr Gln Thr Val Val Thr 135 130

Pro 145	Val	Ile	Glu	Gln	Ile 150	Leu	Pro	Asp	Ser	Pro 155	Gly	Ser	His	Leu	Pro 160
His	Thr	Val	Thr	Leu 165	Val	Ser	Ile	Pro	Ala 170	Ser	Ser	His	Gly	Lys 175	Arg
Gly	Leu	Ser	Val 180	Ser	Ile	Asp	Pro	Pro 185	His	Gly	Pro	Pro	Gly 190	Cys	Gly
Thr	Glu	His 195	Ser	His	Thr	Val	Arg 200	Val	Gln	Gly	Val	Asp 205	Pro	Gly	Cys
Met	Ser 210	Pro	Asp	Val	Lys	Asn 215	Ser	Ile	His	Val	Gly 220	Asp	Arg	Ile	Leu
Glu 225	Ile	Asn	Gly	Thr	Pro 230	Ile	Arg	Asn	Val	Pro 235	Leu	Asp	Glu	Ile	Asp 240
Leu	Leu	Ile	Gln	Glu 245	Thr	Ser	Arg	Leu	Leu 250	Gln	Leu	Thr	Leu	Glu 255	His
Asp	Pro	His	Asp 260	Thr	Leu	Gly	His	Gly 265	Leu	Gly	Pro	Glu	Thr 270	Ser	Pro
Leu	Ser	Ser 275	Pro	Ala	Tyr	Thr	Pro 280	Ser	Gly	Glu	Ala	Gly 285	Ser	Ser	Ala
Arg	Gln 290	Lys	Pro	Val	Leu	Arg 295	Ser	Cys	Ser	Ile	Asp 300	Arg	Ser	Pro	Gly
Ala 305	Gly	Ser	Leu	Gly	Ser 310	Pro	Ala	Ser	Gln	Arg 315	Lys	Asp	Leu	Gly	Arg 320
Ser	Glu	Ser	Leu	Arg 325	Val	Val	Cys	Arg	Pro 330	His	Arg	Ile	Phe	Arg 335	Pro
Ser	Asp	Leu	Ile 340	His	Gly	Glu	Val	Leu 345	Gly	Lys	Gly	Cys	Phe 350	Gly	Gln
Ala	Ile	Lys 355	Val	Thr	His	Arg	Glu 360	Thr	Gly	Glu	Val	Met 365	Val	Met	Lys
Glu	Leu 370	Ile	Arg	Phe	Asp	Glu 375	Glu	Thr	Gln	Arg	Thr 380	Phe	Leu	Ŀys	Glu
Val 385	Lys	Val	Met	Arg	Cys 390	Leu	Glu	His	Pro	Asn 395	Val	Leu	Lys	Phe	Ile 400
Gly	Val	Leu	Tyr	Lys 405	Asp	Lys	Arg	Leu	Asn 410	Phe	Ile	Thr	Glu	Tyr 415	Ile
Lys	Gly	Gly	Thr 420	Leu	Arg	Gly	Ile	Ile 425	Lys	Ser	Met	Asp	Ser 430	Gln	Tyr
Pro	Trp	Ser 435	Gln	Arg	Val	Ser	Phe 440	Ala	Lys	Asp	Ile	Ala 445	Ser	Gly	Met

Ala Tyr Leu His Ser Met Asn Ile Ile His Arg Asp Leu Asn Ser His 455 Asn Cys Leu Val Arg Glu Asn Lys Asn Val Val Val Ala Asp Phe Gly 470 Leu Ala Arg Leu Met Val Asp Glu Lys Thr Gln Pro Glu Gly Leu Arg 485 490 Ser Leu Lys Lys Pro Asp Arg Lys Lys Arg Tyr Thr Val Val Gly Asn Pro Tyr Trp Met Ala Pro Glu Met Ile Asn Gly Arg Ser Tyr Asp Glu 515 Lys Val Asp Val Phe Ser Phe Gly Ile Val Leu Cys Glu Ile Ile Gly Arg Val Asn Ala Asp Pro Asp Tyr Leu Pro Arg Thr Met Asp Phe Gly 550 555 Leu Asn Val Arg Gly Phe Leu Asp Arg Tyr Cys Pro Pro Asn Cys Pro 565 570 Pro Ser Phe Phe Pro Ile Thr Val Arg Cys Cys Asp Leu Asp Pro Glu 585 Lys Arg Pro Ser Phe Val Lys Leu Glu His Trp Leu Glu Thr Leu Arg Met His Leu Ala Gly His Leu Pro Leu Gly Pro Gln Leu Glu Gln Leu Asp Arg Gly Phe Trp Glu Thr Tyr Arg Arg Gly Glu Ser Gly Leu Pro 635 Ala His Pro Glu Val Pro Asp 645 <210> 234 <211> 647 <212> PRT <213> Homo sapiens <400> 234 Met Arg Leu Thr Leu Leu Cys Cys Thr Trp Arg Glu Glu Arg Met Gly Glu Glu Gly Ser Glu Leu Pro Val Cys Ala Ser Cys Gly Gln Arg Ile 20 Tyr Asp Gly Gln Tyr Leu Gln Ala Leu Asn Ala Asp Trp His Ala Asp 35

Cys Phe Arg Cys Cys Asp Cys Ser Ala Ser Leu Ser His Gln Tyr Tyr

Glu Lys Asp Gly Gln Leu Phe Cys Lys Lys Asp Tyr Trp Ala Arg Tyr
65 70 75 80

55

Gly Glu Ser Cys His Gly Cys Ser Glu Gln Ile Thr Lys Gly Leu Val 85 90 95

Met Val Ala Gly Glu Leu Lys Tyr His Pro Glu Cys Phe Ile Cys Leu 100 105 110

Thr Cys Gly Thr Phe Ile Gly Asp Gly Asp Thr Tyr Thr Leu Val Glu 115 120 125

His Ser Lys Leu Tyr Cys Gly His Cys Tyr Tyr Gln Thr Val Val Thr 130 135 140

Pro Val Ile Glu Gln Ile Leu Pro Asp Ser Pro Gly Ser His Leu Pro 145 150 155 160

His Thr Val Thr Leu Val Ser Ile Pro Ala Ser Ser His Gly Lys Arg 165 170 175

Gly Leu Ser Val Ser Ile Asp Pro Pro His Gly Pro Pro Gly Cys Gly
180 185 190

Thr Glu His Ser His Thr Val Arg Val Gln Gly Val Asp Pro Gly Cys 195 200 205

Met Ser Pro Asp Val Lys Asn Ser Ile His Val Gly Asp Arg Ile Leu 210 215 220

Glu Ile Asn Gly Thr Pro Ile Arg Asn Val Pro Leu Asp Glu Ile Asp 225 230 235 240

Leu Leu Ile Gln Glu Thr Ser Arg Leu Gln Leu Thr Leu Glu His
245 250 255

Asp Pro His Asp Thr Leu Gly His Gly Leu Gly Pro Glu Thr Ser Pro 260 265 270

Leu Ser Ser Pro Ala Tyr Thr Pro Ser Gly Glu Ala Gly Ser Ser Ala 275 280 285

Arg Gln Lys Pro Val Leu Arg Ser Cys Ser Ile Asp Arg Ser Pro Gly
290 295 300

Ala Gly Ser Leu Gly Ser Pro Ala Ser Gln Arg Lys Asp Leu Gly Arg 305 310 315 320

Ser Glu Ser Leu Arg Val Val Cys Arg Pro His Arg Ile Phe Arg Pro 325 330 335

Ser Asp Leu Ile His Gly Glu Val Leu Gly Lys Gly Cys Phe Gly Gln 340 345 350

Ala Ile Lys Val Thr His Arg Glu Thr Gly Glu Val Met Val Met Lys

Glu	Leu 370	Ile	Arg	Phe	Asp	Glu 375	Glu	Thr	Gln	Arg	Thr 380	Phe	Leu	Lys	Glu
Val 385	Lys	Val	Met	Arg	Cys 390	Leu	Glu	His	Pro	Asn 395	Val	Leu	Lys	Phe	Ile 400
Gly	Val	Leu	Tyr	Lys 405	Asp	Lys	Arg	Leu	Asn 410	Phe	Ile	Thr	Glu	Tyr 415	Ile
Lys	Gly	Gly	Thr 420	Leu	Arg	Gly	Ile	Ile 425	Lys	Ser	Met	Asp	Ser 430	Gln	Tyr
Pro	Trp	Ser 435	Gln	Arg	Val	Ser	Phe 440	Ala	Lys	Asp	Ile	Ala 445	Ser	Gly	Met
Ala	Tyr 450	Leu	His	Ser	Met	Asn 455	Ile	Ile	His	Arg	Asp 460	Leu	Asn	Ser	His
Asn 465	Cys	Leu	Val	Arg	Glu 470	Asn	Lys	Asn	Val	Val 475	Val	Ala	Asp	Phe	Gly 480
Leu	Ala	Arg	Leu	Met 485	Val	Asp	Glu	Lys	Thr 490	Gln	Pro	Glu	Gly	Leu 495	Arg
Ser	Leu	Lys	Lys 500	Pro	Asp	Arg	Lys	Lys 505	Arg	Tyr	Thr	Val	Val 510	Gly	Asn
Pro	Tyr	Trp 515	Met	Ala	Pro	Glu	Met 520	Ile	Asn	Gly	Arg	Ser 525	Tyr	Asp	Glu
Lys	Val 530	Asp	Val	Phe	Ser	Phe 535	Gly	Ile	Val	Leu	Cys 540	Glu	Ile	Ile	Gly
Arg 545	Val	Asn	Ala	Asp	Pro 550	Asp	Tyr	Leu	Pro	Arg 555	Thr	Met	Asp	Phe	Gly 560
Leu	Asn	Val	Arg	Gly 565	Phe	Leu	Asp	Arg	Tyr 570	Cys	Pro	Pro	Asn	Cys 575	Pro
Pro	Ser	Phe	Phe 580	Pro	Ile	Thr	Val	Arg 585	Cys	Cys	Asp	Leu	Asp 590	Pro	Glu
Lys	Arg	Pro 595	Ser	Phe	Val	Lys	Leu 600	Glu	His	Trp	Leu	Glu 605	Thr	Leu	Arg
Met	His 610	Leu	Ala	Gly	His	Leu 615	Pro	Leu	Gly	Pro	Gln 620	Leu	Glu	Gln	Lev
Asp 625	Arg	Gly	Phe	Trp	Glu 630	Thr	Tyr	Arg	Arg	Gly 635	Glu	Ser	Gly	Leu	Pro 640

Ala His Pro Glu Val Pro Asp

<211> 942

<212> PRT

<213> Homo sapiens

<400> 235

Met Ala Ser Asp Ala Val Gln Ser Glu Pro Arg Ser Trp Ser Leu Leu 1 5 10 15

Glu Gln Leu Gly Leu Ala Gly Ala Asp Leu Ala Ala Pro Gly Val Gln
20 25 30

Gln Gln Leu Glu Leu Glu Arg Glu Arg Leu Arg Arg Glu Ile Arg Lys 35 40 45

Glu Leu Lys Leu Lys Glu Gly Ala Glu Asn Leu Arg Arg Ala Thr Thr 50 60

Asp Leu Gly Arg Ser Leu Gly Pro Val Glu Leu Leu Leu Arg Gly Ser 65 70 75 80

Ser Arg Arg Leu Asp Leu Leu His Gln Gln Leu Gln Glu Leu His Ala 85 90 95

His Val Val Leu Pro Asp Pro Ala Ala Thr His Asp Gly Pro Gln Ser 100 105 110

Pro Gly Ala Gly Gly Pro Thr Cys Ser Ala Thr Asn Leu Ser Arg Val 115 120 125

Ala Gly Leu Glu Lys Gln Leu Ala Ile Glu Leu Lys Val Lys Gln Gly 130 135 140

Ala Glu Asn Met Ile Gln Thr Tyr Ser Asn Gly Ser Thr Lys Asp Arg 145 150 155 160

Lys Leu Leu Leu Thr Ala Gln Gln Met Leu Gln Asp Ser Lys Thr Lys 165 170 175

Ile Asp Ile Ile Arg Met Gln Leu Arg Arg Ala Leu Gln Ala Gly Gln
180 185 190

Leu Glu Asn Gln Ala Ala Pro Asp Asp Thr Gln Gly Ser Pro Asp Leu 195 200 205

Gly Ala Val Glu Leu Arg Ile Glu Glu Leu Arg His His Phe Arg Val 210 215 220

Glu His Ala Val Ala Glu Gly Ala Lys Asn Val Leu Arg Leu Leu Ser 225 230 235 240

Ala Ala Lys Ala Pro Asp Arg Lys Ala Val Ser Glu Ala Gln Glu Lys 245 250 255

Leu Thr Glu Ser Asn Gln Lys Leu Gly Leu Leu Arg Glu Ala Leu Glu 260 265 270

Arg	Arg	Leu 275	Gly	Glu	Leu	Pro	Ala 280	Asp	His	Pro	Lys	Gly 285	Arg	Leu	Leu
Arg	Glu 290	Glu	Leu	Ala	Ala	Ala 295	Ser	Ser	Ala	Ala	Phe 300	Ser	Thr	Arg	Leu
Ala 305	Gly	Pro	Phe	Pro	Ala 310	Thr	His	Tyr	Ser	Thr 315	Leu	Cys	Lys	Pro	Ala 320
Pro	Leu	Thr	Gly	Thr 325	Leu	Glu	Val	Arg	Val 330	Val	Gly	Cys	Arg	Asp 335	Leu
Pro	Glu	Thr	Ile 340	Pro	Trp	Asn	Pro	Thr 345	Pro	Ser	Met	Gly	Gly 350	Pro	Gly
Thr	Pro	Asp 355	Ser	Arg	Pro	Pro	Phe 360	Leu	Ser	Arg	Pro	Ala 365	Arg	Gly	Leu
Tyr	Ser 370	Arg	Ser	Gly	Ser	Leu 375	Ser	Gly	Arg	Ser	Ser 380	Leu	Lys	Ala	Glu
Ala 385	Glu	Asn	Thr	Ser	Glu 390	Val	Ser	Thr	Val	Leu 395	Lys	Leu	Asp	Asn	Thr 400
Val	Val	Gly	Gln	Thr 405	Ser	Trp	Lys	Pro	Cys 410	Gly	Pro	Asn	Ala	Trp 415	Asp
Gln	Ser	Phe	Thr 420	Leu	Glu	Leu	Glu	Arg 425	Ala	Arg	Glu	Leu	Glu 430	Leu	Ala
Val	Phe	Trp 435	Arg	Asp	Gln	Arg	Gly 440	Leu	Cys	Ala	Leu	Lys 445	Phe	Leu	Lys
Leu	Glu 450	Asp	Phe	Leu	Asp	Asn 455	Glu	Arg	His	Glu	Val 460	Gln	Leu	Asp	Met
Glu 465	Pro	Gln	Gly	Cys	Leu 470	Val	Ala	Glu	Val	Thr 475	Phe	Arg	Asn	Pro	Val 480
Ile	Glu	Arg	Ile	Pro 485	Arg	Leu	Arg	Arg	Gln 490	Lys	Lys	Ile	Phe	Ser 495	Lys
Gln	Gln	Gly	Lys 500	Alạ	Phe	Gln	Arg	Ala 505	Arg	Gln	Met	Asn	Ile 510	Asp	Val
Ala	Thr	Trp 515	Val	Arg	Leu	Leu	Arg 520	Arg	Leu	Ile	Pro	Asn 525	Ala	Thr	Gly
Thr	Gly 530	Thr	Phe	Ser	Pro	Gly 535	Ala	Ser	Pro	Gly	Ser 540	Glu	Ala	Arg	Thr
Thr 545	Gly	Asp	Ile	Ser	Val 550	Glu	Lys	Leu	Asn	Leu 555	Gly	Thr	Asp	Ser	Asp 560
Ser	Ser	Pro	Gln	Lys 565	Ser	Ser	Arg	Asp	Pro 570	Pro	Ser	Ser	Pro	Ser 575	Ser

- Leu Ser Ser Pro Ile Gln Glu Ser Thr Ala Pro Glu Leu Pro Ser Glu 580 585 590
- Thr Gln Glu Thr Pro Gly Pro Ala Leu Cys Ser Pro Leu Arg Lys Ser 595 600 605
- Pro Leu Thr Leu Glu Asp Phe Lys Phe Leu Ala Val Leu Gly Arg Gly 610 615 620
- His Phe Gly Lys Val Leu Leu Ser Glu Phe Arg Pro Ser Gly Glu Leu 625 630 635 640
- Phe Ala Ile Lys Ala Leu Lys Lys Gly Asp Ile Val Ala Arg Asp Glu 645 650 655
- Val Glu Ser Leu Met Cys Glu Lys Arg Ile Leu Ala Ala Val Thr Ser 660 665 670
- Ala Gly His Pro Phe Leu Val Asn Leu Phe Gly Cys Phe Gln Thr Pro 675 680 685
- Glu His Val Cys Phe Val Met Glu Tyr Ser Ala Gly Gly Asp Leu Met 690 695 700
- Leu His Ile His Ser Asp Val Phe Ser Glu Pro Arg Ala Ile Phe Tyr 705 710 715 720
- Ser Ala Cys Val Val Leu Gly Leu Gln Phe Leu His Glu His Lys Ile
 725 730 735
- Val Tyr Arg Asp Leu Lys Leu Asp Asn Leu Leu Leu Asp Thr Glu Gly
 740 745 750
- Tyr Val Lys Ile Ala Asp Phe Gly Leu Cys Lys Glu Gly Met Gly Tyr 755 760 765
- Gly Asp Arg Thr Ser Thr Phe Cys Gly Thr Pro Glu Phe Leu Ala Pro 770 775 780
- Glu Val Leu Thr Asp Thr Ser Tyr Thr Arg Ala Val Asp Trp Trp Gly
 785 790 795 800
- Leu Gly Val Leu Leu Tyr Glu Met Leu Val Gly Glu Ser Pro Phe Pro 805 810 815
- Gly Asp Asp Glu Glu Val Phe Asp Ser Ile Val Asn Asp Glu Val 820 825 830
- Arg Tyr Pro Arg Phe Leu Ser Ala Glu Ala Ile Gly Ile Met Arg Arg 835 840 845
- Leu Leu Arg Arg Asn Pro Glu Arg Arg Leu Gly Ser Ser Glu Arg Asp 850 855 860
- Ala Glu Asp Val Lys Lys Gln Pro Phe Phe Arg Thr Leu Gly Trp Glu 865 870 875 880

Ala Leu Leu Ala Arg Arg Leu Pro Pro Pro Phe Val Pro Thr Leu Ser 885 890 895

Gly Arg Thr Asp Val Ser Asn Phe Asp Glu Glu Phe Thr Gly Glu Ala 900 905 910

Pro Thr Leu Ser Pro Pro Arg Asp Ala Arg Pro Leu Thr Ala Ala Glu 915 920 925

Gln Ala Ala Phe Leu Asp Phe Asp Phe Val Ala Gly Gly Cys 930 935 940

<210> 236

<211> 942

<212> PRT

<213> Homo sapiens

<400> 236

Met Ala Ser Asp Ala Val Gln Ser Glu Pro Arg Ser Trp Ser Leu Leu 1 5 10 15

Glu Gln Leu Gly Leu Ala Gly Ala Asp Leu Ala Ala Pro Gly Val Gln
20 25 30

Gln Gln Leu Glu Leu Glu Arg Glu Arg Leu Arg Arg Glu Ile Arg Lys 35 40 45

Glu Leu Lys Leu Lys Glu Gly Ala Glu Asn Leu Arg Arg Ala Thr Thr 50 55 60

Asp Leu Gly Arg Ser Leu Gly Pro Val Glu Leu Leu Leu Arg Gly Ser 65 70 75 80

Ser Arg Arg Leu Asp Leu Leu His Gln Gln Leu Gln Glu Leu His Ala 85 90 95

His Val Val Leu Pro Asp Pro Ala Ala Thr His Asp Gly Pro Gln Ser 100 105 110

Pro Gly Ala Gly Gly Pro Thr Cys Ser Ala Thr Asn Leu Ser Arg Val 115 120 125

Ala Gly Leu Glu Lys Gln Leu Ala Ile Glu Leu Lys Val Lys Gln Gly 130 135 140

Ala Glu Asn Met Ile Gln Thr Tyr Ser Asn Gly Ser Thr Lys Asp Arg 145 150 155 160

Lys Leu Leu Thr Ala Gln Gln Met Leu Gln Asp Ser Lys Thr Lys 165 170 175

Ile Asp Ile Ile Arg Met Gln Leu Arg Arg Ala Leu Gln Ala Gly Gln 180 185 190

Leu Glu Asn Gln Ala Ala Pro Asp Asp Thr Gln Gly Ser Pro Asp Leu 195 200 205

Gly	Ala 210	Val	Glu	Leu	Arg	Ile 215	Glu	Glu	Leu	Arg	His 220	His	Phe	Arg	Val
Glu 225	His	Ala	Val	Ala	Glu 230	Gly	Ala	Lys	Asn	Val 235	Leu	Arg	Leu	Leu	Ser 240
Ala	Ala	Lys	Ala	Pro 245	Asp	Arg	Lys	Ala	Val 250	Ser	Glu	Ala	Gln	Glu 255	Lys
Leu	Thr	Glu	Ser 260	Asn	Gln	Lys	Leu	Gly 265	Leu	Leu	Arg	Glu	Ala 270	Leu	Glu
Arg	Arg	Leu 275	Gly	Glu	Leu	Pro	Ala 280	Asp	His	Pro	Lys	Gly 285	Arg	Leu	Leu
Arg	Glu 290	Glu	Leu	Ala	Ala	Ala 295	Ser	Ser	Ala	Ala	Phe 300	Ser	Thr	Arg	Leu
Ala 305	Gly	Pro	Phe	Pro	Ala 310	Thr	His	Tyr	Ser	Thr 315	Leu	Cys	Lys	Pro	Ala 320
Pro	Leu	Thr	Gly	Thr 325	Leu	Glu	Val	Arg	Val 330	Val	Gly	Cys	Arg	Asp 335	Leu
Pro	Glu	Thr	Ile 340	Pro	Trp	Asn	Pro	Thr 345	Pro	Ser	Met	Gly	Gly 350	Pro	Gly
Thr	Pro	Asp 355	Ser	Arg	Pro	Pro	Phe 360	Leu	Ser	Arg	Pro	Ala 365	Arg	Gly	Leu
Tyr	Ser 370	Arg	Ser	Gly	Ser	Leu 375	Ser	Gly	Arg	Ser	Ser 380	Leu	Lys	Ala	Glu
Ala 385	Glu	Asn	Thr	Ser	Glu 390	Val	Ser	Thr	Val	Leu 395	Lys	Leu	Asp	Asn	Thr 400
Val	Val	Gly	Gln	Thr 405	Ser	Trp	Lys	Pro	Cys 410	Gly	Pro	Asn	Ala	Trp 415	Asp
Gln	Ser	Phe	Thr 420	Leu	Glu	Leu	Glu	Arg 425	Ala	Arg	Glu	Leu	Glu 430	Leu	Ala
Val	Phe	Trp 435	Arg	Asp	Gln	Arg	Gly 440	Leu	Cys	Ala	Leu	Lys 445	Phe	Leu	Lys
Leu	Glu 450	Asp	Phe	Leu	Asp	Asn 455	Glu	Arg	His	Glu	Val 460	Gln	Leu	Asp	Met
Glu 465	Pro	Gln	Gly	Cys	Leu 470	Val	Ala	Glu	Val	Thr 475	Phe	Arg	Asn	Pro	Val 480
Ile	Glu	Arg	Ile	Pro 485	Arg	Leu	Arg	Arg	Gln 490	Lys	Lys	Ile	Phe	Ser 495	Lys
Gln	Gln	Gly	Lys 500	Ala	Phe	Gln	Arg	Ala 505	Arg	Gln	Met	Asn	Ile 510	Asp	Val

Ala	Thr	Trp 515	Val	Arg	Leu	Leu	Arg 520	Arg	Leu	Ile	Pro	Asn 525	Ala	Thr	Gly
Thr	Gly 530	Thr	Phe	Ser	Pro	Gly 535	Ala	Ser	Pro	Gly	Ser 540	Glu	Ala	Arg	Thr
Thr 545	Gly	Asp	Ile	Ser	Val 550	Glu	Lys	Leu	Asn	Leu 555	Gly	Thr	Asp	Ser	Asp 560
Ser	Ser	Pro	Gln	Lys 565	Ser	Ser	Arg	Asp	Pro 570	Pro	Ser	Ser	Pro	Ser 575	Ser
Leu	Ser	Ser	Pro 580	Ile	Gln	Glu	Ser	Thr 585	Ala	Pro	Glu	Leu	Pro 590	Ser	Glu
Thr	Gln	Glu 595	Thr	Pro	Gly	Pro	Ala 600	Leu	Cys	Ser	Pro	Leu 605	Arg	Lys	Ser
Pro	Leu 610	Thr	Leu	Glu	Asp	Phe 615	Lys	Phe	Leu	Ala	Val 620	Leu	Gly	Arg	Gly
His 625	Phe	Gly	Lys	Val	Leu 630	Leu	Ser	Glu	Phe	Arg 635	Pro	Ser	Gly	Glu	Leu 640
Phe	Ala	Ile	Lys	Ala 645	Leu	Lys	Lys	Gly	Asp 650	Ile	Val	Ala	Arg	Asp 655	Glu
Val	Glu	Ser	Leu 660	Met	Cys	Glu	Lys	Arg 665	Ile	Leu	Ala	Ala	Val 670	Thr	Ser
Ala	Gly	His 675	Pro	Phe	Leu	Val	Asn 680	Leu	Phe	Gly	Cys	Phe 685	Gln	Thr	Pro
Glu	His 690	Val	Cys	Phe	Val	Met 695	Glu	Tyr	Ser	Ala	Gly 700	Gly	Asp	Leu	Met
Leu 705	His	Ile	His	Ser	Asp 710	Val	Phe	Ser	Glu	Pro 715	Arg	Ala	Ile	Phe	Tyr 720
Ser	Ala	Cys	Val	Val 725	Leu	Gly	Leu	Gln	Phe 730	Leu	His	Glu	His	Lys 735	Ile
Val	Tyr	Arg	Asp 740	Leu	Lys	Leu	Asp	Asn 745	Leu	Leu	Leu	Asp	Thr 750	Glu	Gly
Tyr	Val	Lys 755	Ile	Ala	Asp	Phe	Gly 760	Leu	Cys	Lys	Glu	Gly 765	Met	Gly	Tyr
Gly	Asp 770	Arg	Thr	Ser	Thr	Phe 775	Cys	Gly	Thr	Pro	Glu 780	Phe	Leu	Ala	Pro
Glu 785	Val	Leu	Thr	Asp	Thr 790	Ser	Tyr	Thr	Arg	Ala 795	Val	Asp	Trp	Trp	Gly 800
Leu	Gly	Val	Leu	Leu 805	Tyr	Glu	Met	Leu	Val 810	Gly	Glu	Ser	Pro	Phe 815	Pro

Gly Asp Asp Glu Glu Val Phe Asp Ser Ile Val Asn Asp Glu Val 820 825 830

Arg Tyr Pro Arg Phe Leu Ser Ala Glu Ala Ile Gly Ile Met Arg Arg 835 840 845

Leu Leu Arg Arg Asn Pro Glu Arg Arg Leu Gly Ser Ser Glu Arg Asp 850 855 860

Ala Glu Asp Val Lys Lys Gln Pro Phe Phe Arg Thr Leu Gly Trp Glu 865 870 875 880

Ala Leu Leu Ala Arg Arg Leu Pro Pro Pro Phe Val Pro Thr Leu Ser 885 890 895

Gly Arg Thr Asp Val Ser Asn Phe Asp Glu Glu Phe Thr Gly Glu Ala 900 905 910

Pro Thr Leu Ser Pro Pro Arg Asp Ala Arg Pro Leu Thr Ala Ala Glu 915 920 925

Gln Ala Ala Phe Leu Asp Phe Asp Phe Val Ala Gly Gly Cys 930 935 940

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<211> 452

<212> PRT

<213> Homo sapiens

<400> 237

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Ile Val Phe Lys Ala Lys His Val Glu Thr Gly Glu Ile Ile Ala Leu 20 25 30

Lys Lys Val Ala Leu Arg Arg Leu Glu Asp Gly Phe Pro Asn Gln Ala 35 40 45

Leu Arg Glu Ile Lys Ala Leu Gln Glu Met Glu Asp Asn Gln Tyr Val
50 60

Val Gln Leu Lys Ala Val Phe Pro His Gly Gly Phe Val Leu Ala 65 70 75 80

Phe Glu Phe Met Leu Ser Asp Leu Ala Glu Val Val Arg His Ala Gln 85 90 95

Arg Pro Leu Ala Gln Ala Gln Val Lys Ser Tyr Leu Gln Met Leu Leu 100 105 110

Lys Gly Val Ala Phe Cys His Ala Asn Asn Ile Val His Arg Asp Leu 115 120 125

Lys Pro Ala Asn Leu Leu Ile Ser Ala Ser Gly Gln Leu Lys Ile Ala

130 140

Asp Phe Gly Leu Ala Arg Val Phe Ser Pro Asp Gly Ser Arg Leu Tyr 150 155 Thr His Gln Val Ala Thr Arg Ser Val Gly Cys Ile Met Gly Glu Leu 165 170 Leu Asn Gly Ser Pro Leu Phe Pro Gly Lys Asn Asp Ile Glu Gln Leu 185 Cys Tyr Val Leu Arg Ile Leu Gly Thr Pro Asn Pro Gln Val Trp Pro 195 Glu Leu Thr Glu Leu Pro Asp Tyr Asn Lys Ile Ser Phe Lys Glu Gln Val Pro Met Pro Leu Glu Glu Val Leu Pro Asp Val Ser Pro Gln Ala Leu Asp Leu Leu Gly Gln Phe Leu Leu Tyr Pro Pro His Gln Arg Ile Ala Ala Ser Lys Ala Leu Leu His Gln Tyr Phe Phe Thr Ala Pro Leu Pro Ala His Pro Ser Glu Leu Pro Ile Pro Gln Arg Leu Gly Gly Pro 275 280 Ala Pro Lys Ala His Pro Gly Pro Pro His Ile His Asp Phe His Val Asp Arg Pro Leu Glu Gly Val Ala Val Glu Pro Arg Ala Asp Ser Ala 315 Leu His Pro Gly Gly Val Arg Ser Trp Pro Trp Ser Arg Leu Pro Ala 325 Pro Gln Asp His Ser Val His Leu Phe Leu Cys His Leu Pro Gly Phe Thr Leu Gln Gly Leu Pro Met Ala Thr Val Gly Pro His His Thr Leu Pro Leu Ser Pro Cys Glu Gly Trp Ser Arg Gly Arg Gly His Val Pro Ser Gln Glu Tyr Glu Asn Ile Gln Ser Ser Arg Gly Asp Ser Trp Pro Val Leu Gly Glu Pro Tyr Leu Leu Cys Ala Thr Asp Val Pro Ile Arg Thr Val Ser Ser Ala Ala Ser Gln Gly Leu His Met Gln Asn Asp Asp 420 425

Ala Cys Leu Gly Ala Ala Ser Pro Glu Cys Cys Leu Leu Val Lys Glu

Lys Cys Arg Glu 450

<210> 238

<211> 454

<212> PRT

<213> Homo sapiens

<400> 238

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Glu Glu Leu Gly Ser Gly Gln Phe Ala Ile Val Arg Lys Cys Arg Gln
20 25 30

Lys Gly Thr Gly Lys Glu Tyr Ala Ala Lys Phe Ile Lys Lys Arg Arg 35 40 45

Leu Ser Ser Ser Arg Arg Gly Val Ser Arg Glu Glu Ile Glu Arg Glu 50 55 60

Val Asn Ile Leu Arg Glu Ile Arg His Pro Asn Ile Ile Thr Leu His 65 70 75 80

Asp Ile Phe Glu Asn Lys Thr Asp Val Val Leu Ile Leu Glu Leu Val 85 90 95

Ser Gly Glu Leu Phe Asp Phe Leu Ala Glu Lys Glu Ser Leu Thr 100 105 110

Glu Asp Glu Ala Thr Gln Phe Leu Lys Gln Ile Leu Asp Gly Val His 115 120 125

Tyr Leu His Ser Lys Arg Ile Ala His Phe Asp Leu Lys Pro Glu Asn 130 135 140

Ile Met Leu Leu Asp Lys Asn Val Pro Asn Pro Arg Ile Lys Leu Ile 145 150 155 160

Asp Phe Gly Ile Ala His Lys Ile Glu Ala Gly Asn Glu Phe Lys Asn 165 170 175

Ile Phe Gly Thr Pro Glu Phe Val Ala Pro Glu Ile Val Asn Tyr Glu 180 185 190

Pro Leu Gly Leu Glu Ala Asp Met Trp Ser Ile Gly Val Ile Thr Tyr 195 200 205

Ile Leu Leu Ser Gly Ala Ser Pro Phe Leu Gly Glu Thr Lys Gln Glu 210 215 220

Thr Leu Thr Asn Ile Ser Ala Val Asn Tyr Asp Phe Asp Glu Glu Tyr 225 230 235 240

Phe Ser Asn Thr Ser Glu Leu Ala Lys Asp Phe Ile Arg Arg Leu Leu 245 250 Val Lys Asp Pro Lys Arg Arg Met Thr Ile Ala Gln Ser Leu Glu His 265 Ser Trp Ile Lys Ala Ile Arg Arg Arg Asn Val Arg Gly Glu Asp Ser 280 Gly Arg Lys Pro Glu Arg Arg Arg Leu Lys Thr Thr Arg Leu Lys Glu Tyr Thr Ile Lys Ser His Ser Ser Leu Pro Pro Asn Asn Ser Tyr Ala 315 310 Asp Phe Glu Arg Phe Ser Lys Val Leu Glu Glu Ala Ala Ala Glu 330 Glu Gly Leu Arg Glu Leu Gln Arg Ser Arg Arg Leu Cys His Glu Asp 345 340 Val Glu Ala Leu Ala Ala Ile Tyr Glu Glu Lys Glu Ala Trp Tyr Arg 360 Glu Glu Ser Asp Ser Leu Gly Gln Asp Leu Arg Arg Leu Arg Gln Glu 370 Leu Leu Lys Thr Glu Ala Leu Lys Arg Gln Ala Gln Glu Glu Ala Lys Gly Ala Leu Leu Gly Thr Ser Gly Leu Lys Arg Arg Phe Ser Arg Leu Glu Asn Arg Tyr Glu Ala Leu Ala Lys Gln Val Ala Ser Glu Met Arg 420 425 Phe Val Gln Asp Leu Val Arg Ala Leu Glu Gln Glu Lys Leu Gln Gly 440 Val Glu Cys Gly Leu Arg 450 <210> 239 <211> 1065 <212> PRT <213> Homo sapiens <400> 239 Met Asp Ala Ala Gly Arg Gly Cys His Leu Leu Pro Leu Pro Ala Ala Arg Gly Pro Ala Arg Ala Pro Ala Ala Ala Ala Ala Ala Ala Ser 20

Pro Pro Gly Pro Cys Ser Gly Ala Ala Cys Ala Pro Ser Ala Ala Ala

40

GIÀ	A1a 50	GIY	Ala	Met	Asn	55	ser	ser	ser	Ala	60 60	GIU	GIU	гуѕ	GIY
Ala 65	Thr	Gly	Gly	Ser	Ser 70	Ser	Ser	Gly	Ser	Gly 75	Ala	Gly	Ser	Cys	Cys 80
Leu	Gly	Ala	Glu	Gly 85	Gly	Ala	Asp	Pro	Arg 90	Gly	Ala	Gly	Ser	Ala 95	Ala
Ala	Ala	Gly	Ala 100	Ala	Ala	Leu	Asp	Glu 105	Pro	Ala	Ala	Ala	Gly 110	Gln	Lys
Glu	Lys	Asp 115	Glu	Ala	Leu	Glu	Glu 120	Lys	Leu	Arg	Asn	Leu 125	Thr	Phe	Arg
Lys	Gln 130	Val	Ser	Tyr	Arg	Lys 135	Ala	Ile	Ser	Arg	Ala 140	Gly	Leu	Gln	His
Leu 145	Ala	Pro	Ala	His	Pro 150	Leu	Ser	Leu	Pro	Val 155	Ala	Asn	Gly	Pro	Ala 160
Lys	Glu	Pro	Arg	Ala 165	Thr	Leu	Asp	Trp	Ser 170	Glu	Asn	Ala	Val	Asn 175	Gly
Glu	His	Leu	Trp 180	Leu	Glu	Thr	Asn	Val 185	Ser	Gly	Asp	Leu	Cys 190	Tyr	Leu
Gly	Glu	Glu 195	Asn	Cys	Gln	Val	Arg 200	Phe	Ala	Lys	Ser	Ala 205	Leu	Arg	Arg
Lys	Cys 210	Ala	Val	Cys	Lys	Ile 215	Val	Val	His	Thr	Ala 220	Cys	Ile	Glu	Gln
Leu 225	Glu	Lys	Ile	Asn	Phe 230	Arg	Cys	Lys	Pro	Thr 235	Phe	Arg	Glu	Gly	Gly 240
Ser	Arg	Ser	Pro	Arg 245	Glu	Asn	Phe	Val	Arg 250	His	His	Trp	Val	His 255	Arg
Arg	Arg	Gln	Glu 260	Gly	Lys	Cys	Lys	Gln 265	Cys	Gly	Lys	Gly	Phe 270	Gln	Gln
Lys	Phe	Ser 275	Phe	His	Ser	Lys	Glu 280	Ile	Val	Ala	Ile	Ser 285	Cys	Ser	Trp
Cys	Lys 290	Gln	Ala	Phe	His	Asn 295	Lys	Val	Thr	Cys	Phe 300	Met	Leu	His	His
Ile 305	Glu	Glu	Pro	Cys	Ser 310	Leu	Gly	Ala	His	Ala 315	Ala	Val	Ile	Val	Pro 320
Pro	Thr	Trp	Ile	Ile 325	Lys	Val	Lys	Lys	Pro 330	Gln	Asn	Ser	Leu	Lys 335	Ala
Ser	Asn	Arg	Lys 340	Lys	Lys	Arg	Thr	Ser 345	Phe	Lys	Arg	Lys	Ala 350	Ser	Lys

Arg	Gly	Met 355	Glu	Gln	Glu	Asn	Lys 360	Gly	Arg	Pro	Phe	Val 365	Ile	Lys	Pro
Ile	Ser 370	Ser	Pro	Leu	Met	Lys 375	Pro	Leu	Leu	Val	Phe 380	Val	Asn	Pro	Lys
Ser 385	Gly	Gly	Asn	Gln	Gly 390	Thr	Lys	Val	Leu	Gln 395	Met	Phe	Met	Trp	Tyr 400
Leu	Asn	Pro	Arg	Gln 405	Val	Phe	Asp	Leu	Ser 410	Gln	Glu	Gly	Pro	Lys 415	Asp
Ala	Leu	Glu	Leu 420	Tyr	Arg	Lys	Val	Pro 425	Asn	Leu	Arg	Ile	Leu 430	Ala	Cys
Gly	Gly	Asp 435	Gly	Thr	Val	Gly	Trp 440	Ile	Leu	Ser	Ile	Leu 445	Asp	Glu	Leu
Gln	Leu 450	Ser	Pro	Gln	Pro	Pro 455	Val	Gly	Val	Leu	Pro 460	Leu	Gly	Thr	Gly
Asn 465	Asp	Leu	Ala	Arg	Thr 470	Leu	Asn	Trp	Gly	Gly 475	Gly	Tyr	Thr	Asp	Glu 480
Pro	Val	Ser	Lys	Ile 485	Leu	Cys	Gln	Val	Glu 490	Asp	Gly	Thr	Val	Val 495	Gln
Leu	Asp	Arg	Trp 500	Asn	Leu	His	Val	Glu 505	Arg	Asn	Pro	Asp	Leu 510	Pro	Pro
Glu	Glu	Leu 515	Glu	Asp	Gly	Val	Cys 520	Lys	Leu	Pro	Leu	Asn 525	Val	Phe	Asn
Asn	Tyr 530	Phe	Ser	Leu	Gly	Phe 535	Asp	Ala	His	Val	Thr 540	Leu	Glu	Phe	His
Glu 545	Ser	Arg	Glu	Ala	Asn 550	Pro	Glu	Lys	Phe	Asn 555	Ser	Arg	Phe	Arg	Asn 560
Lys	Met	Phe	Tyr	Ala 565	Gly	Ala	Ala	Phe	Ser 570	Asp	Phe	Leu	Gln	Arg 575	Ser
Ser	Arg	Asp	Leu 580	Ser	Lys	His	Val	Lys 585	Val	Val	Cys	Asp	Gly 590	Thr	Asp
Leu	Thr	Pro 595	Lys	Ile	Gln	Glu	Leu 600	Lys	Phe	Gln	Cys	Ile 605	Val	Phe	Leu
Asn	Ile 610	Pro	Arg	Tyr	Cys	Ala 615	Gly	Thr	Met	Pro	Trp 620	Gly	Asn	Pro	Gly
Asp 625	His	His	Asp	Phe	Glu 630	Pro	Gln	Arg	His	Asp 635	Asp	Gly	Tyr	Ile	Glu 640
Val	Ile	Gly	Phe	Thr 645	Met	Ala	Ser	Leu	Ala 650	Ala	Leu	Gln	Val	Gly 655	Gly

- His Gly Glu Arg Leu His Gln Cys Arg Glu Val Met Leu Leu Thr Tyr 660 665 670
- Lys Ser Ile Pro Met Gln Val Asp Gly Glu Pro Cys Arg Leu Ala Pro 675 680 685
- Ala Met Ile Arg Ile Ser Leu Arg Asn Gln Ala Asn Met Val Gln Lys 690 695 700
- Ser Lys Arg Arg Thr Ser Met Pro Leu Leu Asn Asp Pro Gln Ser Val 705 710 715 720
- Pro Asp Arg Leu Arg Ile Arg Val Asn Lys Ile Ser Leu Gln Asp Tyr
 725 730 735
- Glu Gly Phe His Tyr Asp Lys Glu Lys Leu Arg Glu Ala Ser Ile Ser 740 745 750
- Asp Trp Leu Arg Thr Ile Ala Gly Glu Leu Val Gln Ser Phe Gly Ala 755 760 765
- Ile Pro Leu Gly Ile Leu Val Val Arg Gly Asp Cys Asp Leu Glu Thr
 770 780
- Cys Arg Met Tyr Ile Asp Arg Leu Gln Glu Asp Leu Gln Ser Val Ser 785 790 795 800
- Ser Gly Ser Gln Arg Val His Tyr Gln Asp His Glu Thr Ser Phe Pro 805 810 815
- Arg Ala Leu Ser Ala Gln Arg Leu Ser Pro Arg Trp Cys Phe Leu Asp 820 825 830
- Asp Arg Ser Gln Glu His Leu His Phe Val Met Glu Ile Ser Gln Asp 835 840 845
- Glu Ile Phe Ile Leu Asp Pro Asp Met Val Val Ser Gln Pro Ala Gly 850 855 860
- Thr Pro Pro Gly Met Pro Asp Leu Val Val Glu Gln Ala Ser Gly Ile 865 870 875 880
- Ser Asp Trp Trp Asn Pro Ala Leu Arg Lys Arg Met Leu Ser Asp Ser 885 890 895
- Gly Leu Gly Met Ile Ala Pro Tyr Tyr Glu Asp Ser Asp Leu Lys Asp 900 905 910
- Leu Ser His Ser Arg Val Leu Gln Ser Pro Val Ser Ser Glu Asp His 915 920 925
- Ala Ile Leu Gln Ala Val Ile Ala Gly Asp Leu Met Lys Leu Ile Glu 930 935 940
- Ser Tyr Lys Asn Gly Gly Ser Leu Leu Ile Gln Gly Pro Asp His Cys 945 950 955 960

- Ser Leu Leu His Tyr Ala Ala Lys Thr Gly Asn Gly Glu Ile Val Lys 965 970 975
- Tyr Ile Leu Asp His Gly Pro Ser Glu Leu Leu Asp Met Ala Asp Ser 980 985 990
- Glu Thr Gly Glu Thr Ala Leu His Lys Ala Ala Cys Gln Arg Asn Arg 995 1000 1005
- Ala Val Cys Gln Leu Leu Val Asp Ala Gly Ala Ser Leu Arg Lys 1010 1015 1020
- Thr Asp Ser Lys Gly Lys Thr Pro Gln Glu Arg Ala Gln Gln Ala 1025 1030 1035
- Gly Asp Pro Asp Leu Ala Ala Tyr Leu Glu Ser Arg Gln Asn Tyr 1040 1045 1050
- Lys Val Ile Gly His Glu Asp Leu Glu Thr Ala Val 1055 1060 1069
- <210> 240
- <211> 606
- <212> PRT
- <213> Homo sapiens
- <400> 240
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- Gly Pro Ala Leu Arg Ala Ala Ala Pro Ala Leu Leu Leu Ala Arg
 20 25 30
- Cys Ala Val Ala Ala Ala Ala Gly Leu Arg Ala Ala Ala Arg Pro Arg 35 40 45
- Pro Pro Glu Leu Gln Ser Ala Ser Ala Gly Pro Ser Val Ser Leu Tyr 50 55 60
- Leu Ser Glu Asp Glu Val Arg Arg Leu Ile Gly Leu Asp Ala Glu Leu 65 70 75 80
- Tyr Tyr Val Arg Asn Asp Leu Ile Ser His Tyr Ala Leu Ser Phe Asn 85 90 95
- Leu Leu Val Pro Ser Glu Thr Asn Phe Leu His Phe Thr Trp His Ala 100 105 110
- Lys Ser Lys Val Glu Tyr Lys Leu Gly Phe Gln Val Asp Asn Val Leu 115 120 125
- Ala Met Asp Met Pro Gln Val Asn Ile Ser Val Gln Gly Glu Val Pro 130 135 140
- Arg Thr Leu Ser Val Phe Arg Val Glu Leu Ser Cys Thr Gly Lys Val

Asp Ser Glu Val Met Ile Leu Met Gln Leu Asn Leu Thr Val Asn Ser 165 170 175

Ser Lys Asn Phe Thr Val Leu Asn Phe Lys Arg Arg Lys Met Cys Tyr 180 185 190

Lys Lys Leu Glu Glu Val Lys Thr Ser Ala Leu Asp Lys Asn Thr Ser 195 200 205

Arg Thr Ile Tyr Asp Pro Val His Ala Ala Pro Thr Thr Ser Thr Arg 210 215 220

Val Phe Tyr Ile Ser Val Gly Val Cys Cys Ala Val Ile Phe Leu Val 225 230 235 240

Ala Ile Ile Leu Ala Val Leu His Leu His Asn Met Lys Arg Ile Glu 245 250 255

Leu Asp Asp Ser Ile Ser Ala Ser Ser Ser Ser Gln Gly Leu Ser Gln 260 265 270

Pro Ser Thr Gln Thr Thr Gln Tyr Leu Arg Ala Asp Thr Pro Asn Asn 275 280 285

Ala Thr Pro Ile Thr Ser Tyr Pro Thr Leu Arg Ile Glu Lys Asn Asp 290 295 300

Leu Arg Ser Val Thr Leu Leu Glu Ala Lys Gly Lys Val Lys Asp Ile 305 310 315 320

Ala Ile Ser Arg Glu Arg Ile Thr Leu Lys Asp Val Leu Gln Glu Gly
325 330 335

Thr Phe Gly Arg Ile Phe His Gly Ile Leu Ile Asp Glu Lys Asp Pro 340 345 350

Asn Lys Glu Lys Gln Ala Phe Val Lys Thr Val Lys Asp Gln Ala Ser 355 360 365

Glu Ile Gln Val Thr Met Met Leu Thr Glu Ser Cys Lys Leu Arg Gly 370 375 380

Leu His His Arg Asn Leu Leu Pro Ile Thr His Val Cys Ile Glu Glu 385 390 395 400

Gly Glu Lys Pro Met Val Ile Leu Pro Tyr Met Asn Trp Gly Asn Leu 405 410 415

Lys Leu Phe Leu Arg Gln Cys Lys Leu Val Glu Ala Asn Asn Pro Gln 420 425 430

Ala Ile Ser Gln Gln Asp Leu Val His Met Ala Ile Gln Ile Ala Cys 435 440 445

Gly Met Ser Tyr Leu Ala Arg Arg Glu Val Ile His Lys Asp Leu Ala

450

Ala Arg Asn Cys Val Ile Asp Asp Thr Leu Gln Val Lys Ile Thr Asp 470 475 Asn Ala Leu Ser Arg Asp Leu Phe Pro Met Asp Tyr His Cys Leu Gly 485 490 Asp Asn Glu Asn Arg Pro Val Arg Trp Met Ala Leu Glu Ser Leu Val 505 Asn Asn Glu Phe Ser Ser Ala Ser Asp Val Trp Ala Phe Gly Val Asn 515 Ser Leu Trp Glu Leu Met Thr Leu Gly Gln Thr Pro Tyr Thr Leu Asp Ile Asp Pro Phe Glu Met Ala Ala Tyr Leu Lys Asp Gly Tyr Arg Ile Ala Gln Pro Ile Thr Cys Pro Asp Glu Leu Phe Ala Val Met Ala Cys 570 Cys Trp Ala Leu Asp Pro Glu Glu Arg Pro Arg Phe Gln Gln Leu Val 585 Gln Cys Leu Thr Glu Phe His Ala Ala Leu Gly Ala Tyr Val 600 <210> 241 <211> 606 <212> PRT <213> Homo sapiens <400> 241 Met Arg Gly Ala Ala Arg Leu Gly Arg Pro Gly Arg Ser Cys Leu Pro Gly Pro Ala Leu Arg Ala Ala Ala Pro Ala Leu Leu Leu Ala Arg 20 Cys Ala Val Ala Ala Ala Gly Leu Arg Ala Ala Arg Pro Arg Pro Pro Glu Leu Gln Ser Ala Ser Ala Gly Pro Ser Val Ser Leu Tyr Leu Ser Glu Asp Glu Val Arg Arg Leu Ile Gly Leu Asp Ala Glu Leu 65 Tyr Tyr Val Arg Asn Asp Leu Ile Ser His Tyr Ala Leu Ser Phe Asn Leu Leu Val Pro Ser Glu Thr Asn Phe Leu His Phe Thr Trp His Ala

гуs	ser	Lys 115	vaı	GIU	Tyr	гÀг	120	GIY	Pne	GIU	vai	125	Asn	vai	Leu
Ala	Met 130	Asp	Met	Pro	Gln	Val 135	Asn	Ile	Ser	Val	Gln 140	Gly	Glu	Val	Pro
Arg 145	Thr	Leu	Ser	Val	Phe 150	Arg	Val	Glu	Leu	Ser 155	Cys	Thr	Gly	Lys	Val 160
Asp	Ser	Glu	Val	Met 165	Ile	Leu	Met	Gln	Leu 170	Asn	Leu	Thr	Val	Asn 175	Ser
Ser	Lys	Asn	Phe 180	Thr	Val	Leu	Asn	Phe 185	Lys	Arg	Arg	Lys	Met 190	Cys	Tyr
Lys	Lys	Leu 195	Glu	Glu	Val	Lys	Thr 200	Ser	Ala	Leu	Asp	Lys 205	Asn	Thr	Ser
Arg	Thr 210	Ile	Tyr	Asp	Pro	Val 215	His	Ala	Ala	Pro	Thr 220	Thr	Ser	Thr	Arg
Val 225	Phe	Tyr	Ile	Ser	Val 230	Gly	Val	Cys	Cys	Ala 235	Val	Ile	Phe	Leu	Val 240
				Ala 245					250			_		255	
		_	260	Ile				265					270		
		275		Thr			280				_	285			
	290			Thr		295					300				
305				Thr	310				_	315	_				320
				Glu 325					330	_				335	
Thr	Phe	Gly	Arg 340	Ile	Phe	His	Gly	Ile 345	Leu	Ile	Asp	Glu	Lys 350	Asp	Pro
Asn	Lys	Glu 355	Lys	Gln	Ala	Phe	Val 360	Lys	Thr	Val	Lys	Asp 365	Gln	Ala	Ser
Glu	Ile 370	Gln	Val	Thr	Met	Met 375	Leu	Thr	Glu	Ser	380	Lys	Leu	Arg	Gly
Leu 385	His	His	Arg	Asn	Leu 390	Leu	Pro	Ile	Thr	His 395	Val	Cys	Ile	Glu	Glu 400
Gly	Glu	Lys	Pro	Met 405	Val	Ile	Leu	Pro	Tyr 410	Met	Asn	Trp	Gly	Asn 415	Leu

Lys Leu Phe Leu Arg Gln Cys Lys Leu Val Glu Ala Asn Asn Pro Gln 420 425 Ala Ile Ser Gln Gln Asp Leu Val His Met Ala Ile Gln Ile Ala Cys 440 Gly Met Ser Tyr Leu Ala Arg Arg Glu Val Ile His Lys Asp Leu Ala 455 Ala Arg Asn Cys Val Ile Asp Asp Thr Leu Gln Val Lys Ile Thr Asp 465 470 475 Asn Ala Leu Ser Arg Asp Leu Phe Pro Met Asp Tyr His Cys Leu Gly 490 Asp Asn Glu Asn Arg Pro Val Arg Trp Met Ala Leu Glu Ser Leu Val 505 Asn Asn Glu Phe Ser Ser Ala Ser Asp Val Trp Ala Phe Gly Val Asn 520 515 Ser Leu Trp Glu Leu Met Thr Leu Gly Gln Thr Pro Tyr Thr Leu Asp 535 Ile Asp Pro Phe Glu Met Ala Ala Tyr Leu Lys Asp Gly Tyr Arg Ile 545 Ala Gln Pro Ile Thr Cys Pro Asp Glu Leu Phe Ala Val Met Ala Cys 570 Cys Trp Ala Leu Asp Pro Glu Glu Arg Pro Arg Phe Gln Gln Leu Val 585 Gln Cys Leu Thr Glu Phe His Ala Ala Leu Gly Ala Tyr Val 595 600 605 <210> 242 <211> 625 <212> PRT <213> Homo sapiens <400> 242 Met Ser Ala Glu Val Arg Leu Arg Leu Gln Gln Leu Val Leu Asp 1.0 Pro Gly Phe Leu Gly Leu Glu Pro Leu Leu Asp Leu Leu Gly Val 20 His Gln Glu Leu Gly Ala Ser Glu Leu Ala Gln Asp Lys Tyr Val Ala Asp Phe Leu Gln Trp Ala Glu Pro Ile Val Val Arg Leu Lys Glu Val Arg Leu Gln Arg Asp Asp Phe Glu Ile Leu Lys Val Ile Gly Arg Gly

65

70

Ala Phe Ser Glu Val Ala Val Val Lys Met Lys Gln Thr Gly Gln Val Tyr Ala Met Lys Ile Met Asn Lys Trp Asp Met Leu Lys Arg Gly Glu 105 Val Ser Cys Phe Arg Glu Glu Arg Asp Val Leu Val Asn Gly Asp Arg Arg Trp Ile Thr Gln Leu His Phe Ala Phe Gln Asp Glu Asn Tyr Leu Tyr Leu Val Met Glu Tyr Tyr Val Gly Gly Asp Leu Leu Thr Leu Leu 145 155 Ser Lys Phe Gly Glu Arg Ile Pro Ala Glu Met Ala Arg Phe Tyr Leu 170 Ala Glu Ile Val Met Ala Ile Asp Ser Val His Arg Leu Gly Tyr Val 185 His Arg Asp Ile Lys Pro Asp Asn Ile Leu Leu Asp Arg Cys Gly His 195 Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu Lys Leu Arg Ala Asp Gly Thr Val Arg Ser Leu Val Ala Val Gly Thr Pro Asp Tyr Leu Ser Pro 225 235 240 Glu Ile Leu Gln Ala Val Gly Gly Gly Pro Gly Thr Gly Ser Tyr Gly Pro Glu Cys Asp Trp Trp Ala Leu Gly Val Phe Ala Tyr Glu Met Phe Tyr Gly Gln Thr Pro Phe Tyr Ala Asp Ser Thr Ala Glu Thr Tyr Gly 275 Lys Ile Val His Tyr Lys Glu His Leu Ser Leu Pro Leu Val Asp Glu 300 Gly Val Pro Glu Glu Ala Arg Asp Phe Ile Gln Arg Leu Leu Cys Pro 315 Pro Glu Thr Arg Leu Gly Arg Gly Gly Ala Gly Asp Phe Arg Thr His 325 Pro Phe Phe Gly Leu Asp Trp Asp Gly Leu Arg Asp Ser Val Pro 345 Pro Phe Thr Pro Asp Phe Glu Gly Ala Thr Asp Thr Cys Asn Phe Asp 355 360 365 Leu Val Glu Asp Gly Leu Thr Ala Met Glu Thr Leu Ser Asp Ile Arg

375

380

Glu Gly Ala Pro Leu Gly Val His Leu Pro Phe Val Gly Tyr Ser Tyr Ser Cys Met Ala Leu Arg Asp Ser Glu Val Pro Gly Pro Thr Pro Met Glu Leu Glu Ala Glu Gln Leu Leu Glu Pro His Val Gln Ala Pro Ser 420 Leu Glu Pro Ser Val Ser Pro Gln Asp Glu Thr Ala Glu Val Ala Val Pro Ala Ala Val Pro Ala Ala Glu Ala Glu Ala Glu Val Thr Leu Arg 450 Glu Leu Gln Glu Pro Leu Glu Glu Glu Val Leu Thr Arg Gln Ser Leu 475 Ser Arg Glu Met Glu Ala Ile Arg Thr Asp Asn Gln Asn Phe Ala Ser 490 Gln Leu Arg Glu Ala Glu Ala Arg Asn Arg Asp Leu Glu Ala His Val 500 505 Arg Gln Leu Gln Glu Arg Met Glu Leu Leu Gln Ala Glu Gly Ala Thr Ala Val Thr Gly Val Pro Ser Pro Arg Ala Thr Asp Pro Pro Ser His 540 Met Ala Pro Arg Pro Trp Leu Trp Ala Ser Ala Arg Trp Trp Gly Gln Ala Pro Cys Thr Ala Ala Thr Cys Cys Ser Leu Pro Gly Ser Leu Gly 570 Leu Ala Tyr Arg Arg Phe Pro Cys Ser Cys Ser Pro Leu Phe Cys 580 Leu Val Pro Pro Pro Trp Ala Ala Leu Gly Trp Trp Pro Thr Pro Ala Asn Ser Pro Gln Ser Gly Ala Ala Gln Glu Pro Pro Ala Leu Pro Glu 615 620 Pro 625 <210> 243 <211> 625 <212> PRT <213> Homo sapiens <400> 243

Met Ser Ala Glu Val Arg Leu Arg Leu Gln Gln Leu Val Leu Asp

5

Pro Gly Phe Leu Gly Leu Glu Pro Leu Leu Asp Leu Leu Leu Gly Val 20 25 His Gln Glu Leu Gly Ala Ser Glu Leu Ala Gln Asp Lys Tyr Val Ala 40 Asp Phe Leu Gln Trp Ala Glu Pro Ile Val Val Arg Leu Lys Glu Val Arg Leu Gln Arg Asp Asp Phe Glu Ile Leu Lys Val Ile Gly Arg Gly Ala Phe Ser Glu Val Ala Val Val Lys Met Lys Gln Thr Gly Gln Val Tyr Ala Met Lys Ile Met Asn Lys Trp Asp Met Leu Lys Arg Gly Glu 105 Val Ser Cys Phe Arg Glu Glu Arg Asp Val Leu Val Asn Gly Asp Arg Arg Trp Ile Thr Gln Leu His Phe Ala Phe Gln Asp Glu Asn Tyr Leu Tyr Leu Val Met Glu Tyr Tyr Val Gly Gly Asp Leu Leu Thr Leu Leu 145 150 155 160 Ser Lys Phe Gly Glu Arg Ile Pro Ala Glu Met Ala Arg Phe Tyr Leu 170 Ala Glu Ile Val Met Ala Ile Asp Ser Val His Arg Leu Gly Tyr Val 185 His Arg Asp Ile Lys Pro Asp Asn Ile Leu Leu Asp Arg Cys Gly His 195 Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu Lys Leu Arg Ala Asp Gly Thr Val Arg Ser Leu Val Ala Val Gly Thr Pro Asp Tyr Leu Ser Pro 225 230 235 240 Glu Ile Leu Gln Ala Val Gly Gly Gly Pro Gly Thr Gly Ser Tyr Gly Pro Glu Cys Asp Trp Trp Ala Leu Gly Val Phe Ala Tyr Glu Met Phe Tyr Gly Gln Thr Pro Phe Tyr Ala Asp Ser Thr Ala Glu Thr Tyr Gly 275 Lys Ile Val His Tyr Lys Glu His Leu Ser Leu Pro Leu Val Asp Glu 290 295 300

Gly Val Pro Glu Glu Ala Arg Asp Phe Ile Gln Arg Leu Leu Cys Pro

Pro Glu Thr Arg Leu Gly Arg Gly Gly Ala Gly Asp Phe Arg Thr His 325

Pro Phe Phe Phe Gly Leu Asp Trp Asp Gly Leu Arg Asp Ser Val Pro 345

Pro Phe Thr Pro Asp Phe Glu Gly Ala Thr Asp Thr Cys Asn Phe Asp 355 360 365

Leu Val Glu Asp Gly Leu Thr Ala Met Glu Thr Leu Ser Asp Ile Arg 370 375 380

Glu Gly Ala Pro Leu Gly Val His Leu Pro Phe Val Gly Tyr Ser Tyr 385 390 395 400

Ser Cys Met Ala Leu Arg Asp Ser Glu Val Pro Gly Pro Thr Pro Met 405 410 415

Glu Leu Glu Ala Glu Gln Leu Leu Glu Pro His Val Gln Ala Pro Ser 420 425 430

Leu Glu Pro Ser Val Ser Pro Gln Asp Glu Thr Ala Glu Val Ala Val
435 440 445

Pro Ala Ala Val Pro Ala Ala Glu Ala Glu Ala Glu Val Thr Leu Arg 450 455 460

Glu Leu Gln Glu Pro Leu Glu Glu Glu Val Leu Thr Arg Gln Ser Leu 465 470 475 480

Ser Arg Glu Met Glu Ala Ile Arg Thr Asp Asn Gln Asn Phe Ala Ser 485 490 495

Gln Leu Arg Glu Ala Glu Ala Arg Asn Arg Asp Leu Glu Ala His Val 500 505 510

Arg Gln Leu Gln Glu Arg Met Glu Leu Leu Gln Ala Glu Gly Ala Thr 515 520 525

Ala Val Thr Gly Val Pro Ser Pro Arg Ala Thr Asp Pro Pro Ser His 530 540

Met Ala Pro Arg Pro Trp Leu Trp Ala Ser Ala Arg Trp Trp Gly Gln 545 550 555 560

Ala Pro Cys Thr Ala Ala Thr Cys Cys Ser Leu Pro Gly Ser Leu Gly 565 570 575

Leu Ala Tyr Arg Arg Phe Pro Cys Ser Cys Ser Pro Leu Phe Cys 580 585 590

Leu Val Pro Pro Pro Trp Ala Ala Leu Gly Trp Trp Pro Thr Pro Ala 595 600 605

Asn Ser Pro Gln Ser Gly Ala Ala Gln Glu Pro Pro Ala Leu Pro Glu

Pro 625

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<211> 624

<212> PRT

<213> Homo sapiens

<400> 244

Met Glu Ile Pro Gly Ser Leu Cys Lys Lys Val Lys Leu Ser Asn Asn 1 5 10 15

Ala Gln Asn Trp Gly Met Gln Arg Ala Thr Asn Val Thr Tyr Gln Ala
20 25 30

His His Val Ser Arg Asn Lys Arg Gly Gln Val Val Gly Thr Arg Gly 35 40 45

Gly Phe Arg Gly Cys Thr Val Trp Leu Thr Gly Leu Ser Gly Ala Gly 50 55 60

Lys Thr Thr Val Ser Met Ala Leu Glu Glu Tyr Leu Val Cys His Gly 65 70 75 80

Ile Pro Cys Tyr Thr Leu Asp Gly Asp Asn Ile Arg Gln Gly Leu Asn 85 90 95

Lys Asn Leu Gly Phe Ser Pro Glu Asp Arg Glu Glu Asn Val Arg Arg
100 105 110

Ile Ala Glu Val Ala Lys Leu Phe Ala Asp Ala Gly Leu Val Cys Ile 115 120 125

Thr Ser Phe Ile Ser Pro Tyr Thr Gln Asp Arg Asn Asn Ala Arg Gln 130 135 140

Ile His Glu Gly Ala Ser Leu Pro Phe Phe Glu Val Phe Val Asp Ala 145 150 155 160

Pro Leu His Val Cys Glu Gln Arg Asp Val Lys Gly Leu Tyr Lys Lys 165 170 175

Ala Arg Ala Gly Glu Ile Lys Gly Phe Thr Gly Ile Asp Ser Glu Tyr 180 185 190

Glu Lys Pro Glu Ala Pro Glu Leu Val Leu Lys Thr Asp Ser Cys Asp 195 200 205

Val Asn Asp Cys Val Gln Gln Val Val Glu Leu Leu Gln Glu Arg Asp 210 215 220

Ile Val Pro Val Asp Ala Ser Tyr Glu Val Lys Glu Leu Tyr Val Pro 225 230 235 240

GIU	Asn	гÀг	Leu	H1S 245	Leu	Ala	ьys	Thr	250	Ата	GIU	Thr	ьeu	255	AIA
Leu	Lys	Ile	Asn 260	Lys	Val	Asp	Met	Gln 265	Trp	Val	Glņ	Val	Leu 270	Ala	Glu
Gly	Trp	Ala 275	Thr	Pro	Leu	Asn	Gly 280	Phe	Met	Arg	Glu	Arg 285	Glu	Tyr	Leu
Gln	Cys 290	Leu	His	Phe	Asp	Cys 295	Leu	Leu	Asp	Gly	Gly 300	Val	Ile	Asn	Leu
Ser 305	Val	Pro	Ile	Val	Leu 310	Thr	Ala	Thr	His	Glu 315	Asp	Lys	Glu	Arg	Leu 320
Asp	Gly	Cys	Thr	Ala 325	Phe	Ala	Leu	Met	Tyr 330	Glu	Gly	Arg	Arg	Val 335	Ala
Ile	Leu	Arg	Asn 340	Pro	Glu	Phe	Phe	Glu 345	His	Arg	Lys	Glu	Glu 350	Arg	Cys
Ala	Arg	Gln 355	Trp	Gly	Thr	Thr	Cys 360	Lys	Asn	His	Pro	Tyr 365	Ile	Lys	Met
Val	Met 370	Glu	Gln	Gly	Asp	Trp 375	Leu	Ile	Gly	Gly	Asp 380	Leu	Gln	Val	Leu
Asp 385	Arg	Val	Tyr	Trp	Asn 390	Asp	Gly	Leu	Asp	Gln 395	Tyr	Arg	Leu	Thr	Pro 400
Thr	Glu	Leu	Lys	Gln 405	Lys	Phe	Lys	Asp	Met 410	Asn	Ala	Asp	Ala	Val 415	Phe
Ala	Phe	Gln	Leu 420	Arg	Asn	Pro	Val	His 425	Asn	Gly	His	Ala	Leu 430	Leu	Met
Gln	Asp	Thr 435	His	Lys	Gln	Leu	Leu 440	Glu	Arg	Gly	Tyr	Arg 445	Arg	Pro	Val
Leu	Leu 450	Leu	His	Pro	Leu	Gly 455	Gly	Trp	Thr	Lys	Asp 460	Asp	Asp	Val	Pro
Leu 465	Met	Trp	Arg	Met	Lys 470	Gln	His	Ala	Ala	Val 475	Leu	Glu	Glu	Gly	Val 480
Leu	Asn	Pro	Glu	Thr 485	Thr	Val	Val	Ala	Ile 490	Phe	Pro	Ser	Pro	Met 495	Met
Tyr	Ala	Gly	Pro 500	Thr	Glu	Val	Gln	Trp 505	His	Cys	Arg	Ala	Arg 510	Met	Val
Ala	Gly	Ala 515	Asn	Phe	Tyr	Met	Cys 520	Gly	Arg	Asp	Pro	Ala 525	Gly	Met	Pro
His	Pro 530	Glu	Thr	Gly	Lys	Asp 535	Leu	Tyr	Glu	Pro	Ser 540	His	Gly	Ala	Lys

Val 545	Leu	Thr	Met	Ala	Pro 550	Gly	Leu	Ile	Thr	Leu 555	Glu	Ile	Val	Pro	Phe 560
Arg	Val	Ala	Ala	Tyr 565	Asn	Lys	Lys	Lys	Lys 570	Arg	Met	Asp	Tyr	Tyr 575	Asp
Ser	Glu	His	His 580	Glu	Asp	Phe	Glu	Phe 585	Ile	Leu	Gly	Thr	Arg 590	Met	Arg
Lys	Leu	Ala 595	Arg	Glu	Gly	Gln	Lys 600	Pro	Pro	Glu	Gly	Phe 605	Met	Ala	Pro
Lys	Ala 610	Trp	Thr	Val	Leu	Thr 615	Glu	Tyr	Tyr	Lys	Ser 620	Leu	Glu	Lys	Ala
<210 <211 <212 <213	L> 9 2> I	245 556 PRT Homo	sapi	lens											
<400)> 2	245													
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Ser	Val	Val	Leu 20	Cys	Ser	Cys	Pro	Ser 25	Pro	Ser	Met	Val	Arg 30	Thr	Gln
Thr	Glu	Ser 35	Ser	Thr	Pro	Pro	Gly 40	Ile	Pro	Gly	Gly	Ser 45	Arg	Gln	Gly
Pro	Ala 50	Met	Asp	Gly	Thr	Ala 55	Ala	Glu	Pro	Arg	Pro 60	Gly	Ala	Gly	Ser
Leu 65	Gln	His	Ala	Gln	Pro 70	Pro	Pro	Gln	Pro	Arg 75	Lys	Lys	Arg	Pro	Glu 80
Asp	Phe	Lys	Phe	Gly 85	Lys	Ile	Leu	Gly	Glu 90	Gly	Ser	Phe	Ser	Thr 95	Val
Val	Leu	Ala	Arg 100	Glu	Leu	Ala	Thr	Ser 105	Arg	Glu	Tyr	Ala	Ile 110	Lys	Ile
Leu	Glu	Lys 115	Arg	His	Ile	Ile	Lys 120	Glu	Asn	Lys	Val	Pro 125	Tyr	Val	Thr
Arg	Glu 130	Arg	Asp	Val	Met	Ser 135	Arg	Leu	Asp	His	Pro 140	Phe	Phe	Val	Lys
Leu 145	Tyr	Phe	Thr	Phe	Gln 150	Asp	Asp	Glu	Lys	Leu 155	Tyr	Phe	Gly	Leu	Ser 160
Tyr	Ala	Lys	Asn	Gly 165	Glu	Leu	Leu	Lys	Tyr 170	Ile	Arg	Lys	Ile	Gly 175	Ser
Phe	Asp	Glu	Thr 180	Cys	Thr	Arg	Phe	Tyr 185	Thr	Ala	Glu	Ile	Val 190	Ser	Ala

Leu	Glu	Tyr 195	Leu	His	Gly	Lys	Gly 200	Ile	Ile	His	Arg	Asp 205	Leu	Lys	Pro
Glu	Asn 210	Ile	Leu	Leu	Asn	Glu 215	Asp	Met	His	Ile	Gln 220	Ile	Thr	Asp	Phe
Gly 225	Thr	Ala	Lys	Val	Leu 230	Ser	Pro	Glu	Ser	Lys 235	Gln	Ala	Arg	Ala	Asn 240
Ser	Phe	Val	Gly	Thr 245	Ala	Gln	Tyr	Val	Ser 250	Pro	Glu	Leu	Leu	Thr 255	Glu
Lys	Ser	Ala	Cys 260	Lys	Ser	Ser	Asp	Leu 265	Trp	Ala	Leu	Gly	Cys 270	Ile	Ile
Tyr	Gln	Leu 275	Val	Ala	Gly	Leu	Pro 280	Pro	Phe	Arg	Ala	Gly 285	Asn	Glu	Tyr
Leu	Ile 290	Phe	Gln	Lys	Ile	Ile 295	Lys	Leu	Glu	Tyr	Asp 300	Phe	Pro	Glu	Lys
Phe 305	Phe	Pro	Lys	Ala	Arg 310	Asp	Leu	Val	Glu	Lys 315	Leu	Leu	Val	Leu	Asp 320
Ala	Thr	Lys	Arg	Leu 325	Gly	Cys	Glu	Glu	Met 330	Glu	Gly	Tyr	Gly	Pro 335	Leu
Lys	Ala	His	Pro 340	Phe	Phe	Glu	Ser	Val 345	Thr	Trp	Glu	Asn	Leu 350	His	Gln
Gln	Thr	Pro 355	Pro	Lys	Leu	Thr	Ala 360	Tyr	Leu	Pro	Ala	Met 365	Ser	Glu	Asp
Asp	Glu 370	Asp	Cys	Tyr	Gly	Asn 375	Tyr	Asp	Asn	Leu	Leu 380	Ser	Gln	Phe	Gly
Cys 385	Met	Gln	Val	Ser	Ser 390	Ser	Ser	Ser	Ser	His 395	Ser	Leu	Ser	Ala	Ser 400
Asp	Thr	Gly	Leu	Pro 405	Gln	Arg	Ser	Gly	Ser 410	Asn	Ile	Glu	Gln	Tyr 415	Ile
His	Asp	Leu	Asp 420	Ser	Asn	Ser	Phe	Glu 425	Leu	Asp	Leu	Gln	Phe 430	Ser	Glu
Asp	Glu	Lys 435	Arg	Leu	Leu	Leu	Glu 440	Lys	Gln	Ala	Gly	Gly 445	Asn	Pro	Trp
His	Gln 450	Phe	Val	Glu	Asn	Asn 455	Leu	Ile	Leu	Lys	Met 460	Gly	Pro	Val	Asp
Lys 465	Arg	Lys	Gly	Leu	Phe 470	Ala	Arg	Arg	Arg	Gln 475	Leu	Leu	Leu	Thr	Glu 480
Gly	Pro	His	Leu	Tyr 485	Tyr	Val	Asp	Pro	Val 490	Asn	Lys	Val	Leu	Lys 495	Gly

Glu Ile Pro Trp Ser Gln Glu Leu Arg Pro Glu Ala Lys Asn Phe Lys
500 505 510

Thr Phe Phe Val His Thr Pro Asn Arg Thr Tyr Tyr Leu Met Asp Pro 515 520 525

Ser Gly Asn Ala His Lys Trp Cys Arg Lys Ile Gln Glu Val Trp Arg 530 540

Gln Arg Tyr Gln Ser His Pro Asp Ala Ala Val Gln 545 550 555

<210> 246

<211> 479

<212> PRT

<213> Homo sapiens

<400> 246

Met Ser Asp Val Thr Ile Val Lys Glu Gly Trp Val Gln Lys Arg Gly
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Glu Tyr Ile Lys Asn Trp Arg Pro Arg Tyr Phe Leu Leu Lys Thr Asp 20 25 30

Gly Ser Phe Ile Gly Tyr Lys Glu Lys Pro Gln Asp Val Asp Leu Pro 35 40 45

Tyr Pro Leu Asn Asn Phe Ser Val Ala Lys Cys Gln Leu Met Lys Thr 50 55 60

Glu Arg Pro Lys Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp Thr 65 70 75 80

Thr Val Ile Glu Arg Thr Phe His Val Asp Thr Pro Glu Glu Arg Glu 85 90 95

Glu Trp Thr Glu Ala Ile Gln Ala Val Ala Asp Arg Leu Gln Arg Gln
100 105 110

Glu Glu Arg Met Asn Cys Ser Pro Thr Ser Gln Ile Asp Asn Ile 115 120 125

Gly Glu Glu Met Asp Ala Ser Thr Thr His His Lys Arg Lys Thr 130 135 140

Met Asn Asp Phe Asp Tyr Leu Lys Leu Leu Gly Lys Gly Thr Phe Gly 145 150 155 160

Lys Val Ile Leu Val Arg Glu Lys Ala Ser Gly Lys Tyr Tyr Ala Met 165 170 175

Lys Ile Leu Lys Lys Glu Val Ile Ile Ala Lys Asp Glu Val Ala His 180 185 190

Thr Leu Thr Glu Ser Arg Val Leu Lys Asn Thr Arg His Pro Phe Leu

195 200 205

Thr Ser Leu Lys Tyr Ser Phe Gln Thr Lys Asp Arg Leu Cys Phe Val 215 Met Glu Tyr Val Asn Gly Gly Glu Leu Phe Phe His Leu Ser Arg Glu 230 235 Arg Val Phe Ser Glu Asp Arg Thr Arg Phe Tyr Gly Ala Glu Ile Val 250 Ser Ala Leu Asp Tyr Leu His Ser Gly Lys Ile Val Tyr Arg Asp Leu Lys Leu Glu Asn Leu Met Leu Asp Lys Asp Gly His Ile Lys Ile Thr Asp Phe Gly Leu Cys Lys Glu Gly Ile Thr Asp Ala Ala Thr Met Lys Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Leu Glu Asp 305 Asn Asp Tyr Gly Arg Ala Val Asp Trp Trp Gly Leu Gly Val Val Met 330 Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr Asn Gln Asp His Glu Lys Leu Phe Glu Leu Ile Leu Met Glu Asp Ile Lys Phe Pro Arg Thr 360 Leu Ser Ser Asp Ala Lys Ser Leu Leu Ser Gly Leu Leu Ile Lys Asp 375 Pro Asn Lys Arg Leu Gly Gly Gly Pro Asp Ala Lys Glu Ile Met 385

Arg His Ser Phe Phe Ser Gly Val Asn Trp Gln Asp Val Tyr Asp Lys

Lys Leu Val Pro Pro Phe Lys Pro Gln Val Thr Ser Glu Thr Asp Thr 420 425 430

Arg Tyr Phe Asp Glu Glu Phe Thr Ala Gln Thr Ile Thr Ile Thr Pro
435 440 445

Pro Glu Lys Tyr Asp Glu Asp Gly Met Asp Cys Met Asp Asn Glu Arg 450 455 460

Arg Pro His Phe Pro Gln Phe Ser Tyr Ser Ala Ser Gly Arg Glu 465 470 475

<210> 247

<211> 479

<212> PRT

<213> Homo sapiens

- Met Ser Asp Val Thr Ile Val Lys Glu Gly Trp Val Gln Lys Arg Gly
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- Glu Tyr Ile Lys Asn Trp Arg Pro Arg Tyr Phe Leu Leu Lys Thr Asp 20 25 30
- Gly Ser Phe Ile Gly Tyr Lys Glu Lys Pro Gln Asp Val Asp Leu Pro 35 40 45
- Tyr Pro Leu Asn Asn Phe Ser Val Ala Lys Cys Gln Leu Met Lys Thr 50 55 60
- Glu Arg Pro Lys Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp Thr 65 70 75 80
- Thr Val Ile Glu Arg Thr Phe His Val Asp Thr Pro Glu Glu Arg Glu 85 90 95
- Glu Trp Thr Glu Ala Ile Gln Ala Val Ala Asp Arg Leu Gln Arg Gln
 100 105 110
- Glu Glu Arg Met Asn Cys Ser Pro Thr Ser Gln Ile Asp Asn Ile 115 120 125
- Gly Glu Glu Met Asp Ala Ser Thr Thr His His Lys Arg Lys Thr 130 135 140
- Met Asn Asp Phe Asp Tyr Leu Lys Leu Leu Gly Lys Gly Thr Phe Gly 145 150 155 160
- Lys Val Ile Leu Val Arg Glu Lys Ala Ser Gly Lys Tyr Tyr Ala Met 165 170 175
- Lys Ile Leu Lys Lys Glu Val Ile Ile Ala Lys Asp Glu Val Ala His 180 185 190
- Thr Leu Thr Glu Ser Arg Val Leu Lys Asn Thr Arg His Pro Phe Leu 195 200 205
- Thr Ser Leu Lys Tyr Ser Phe Gln Thr Lys Asp Arg Leu Cys Phe Val 210 215 220
- Met Glu Tyr Val Asn Gly Gly Glu Leu Phe Phe His Leu Ser Arg Glu 225 230 235 240
- Arg Val Phe Ser Glu Asp Arg Thr Arg Phe Tyr Gly Ala Glu Ile Val 245 250 255
- Ser Ala Leu Asp Tyr Leu His Ser Gly Lys Ile Val Tyr Arg Asp Leu 260 265 270
- Lys Leu Glu Asn Leu Met Leu Asp Lys Asp Gly His Ile Lys Ile Thr 275 280 285

Asp Phe Gly Leu Cys Lys Glu Gly Ile Thr Asp Ala Ala Thr Met Lys 290 295 300 Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Leu Glu Asp 310 315 Asn Asp Tyr Gly Arg Ala Val Asp Trp Trp Gly Leu Gly Val Val Met 330 Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr Asn Gln Asp His Glu Lys Leu Phe Glu Leu Ile Leu Met Glu Asp Ile Lys Phe Pro Arg Thr 360 Leu Ser Ser Asp Ala Lys Ser Leu Leu Ser Gly Leu Leu Ile Lys Asp Pro Asn Lys Arg Leu Gly Gly Gly Pro Asp Asp Ala Lys Glu Ile Met 390 Arg His Ser Phe Phe Ser Gly Val Asn Trp Gln Asp Val Tyr Asp Lys 410 Lys Leu Val Pro Pro Phe Lys Pro Gln Val Thr Ser Glu Thr Asp Thr Arg Tyr Phe Asp Glu Glu Phe Thr Ala Gln Thr Ile Thr Ile Thr Pro 440 Pro Glu Lys Tyr Asp Glu Asp Gly Met Asp Cys Met Asp Asn Glu Arg 455 Arg Pro His Phe Pro Gln Phe Ser Tyr Ser Ala Ser Gly Arg Glu 465 470 <210> 248 <211> 479 <212> PRT <213> Homo sapiens <400> 248 Met Ser Asp Val Thr Ile Val Lys Glu Gly Trp Val Gln Lys Arg Gly 5 10 Glu Tyr Ile Lys Asn Trp Arg Pro Arg Tyr Phe Leu Leu Lys Thr Asp 20 Gly Ser Phe Ile Gly Tyr Lys Glu Lys Pro Gln Asp Val Asp Leu Pro Tyr Pro Leu Asn Asn Phe Ser Val Ala Lys Cys Gln Leu Met Lys Thr 50

Glu Arg Pro Lys Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp Thr

75

70

Thr	Val	Ile	Glu	Arg 85	Thr	Phe	His	Val	Asp 90	Thr	Pro	Glu	Glu	Arg 95	Glu
Glu	Trp	Thr	Glu 100	Ala	Ile	Gln	Ala	Val 105	Ala	Asp	Arg	Leu	Gln 110	Arg	Gln
Glu	Glu	Glu 115	Arg	Met	Asn	Cys	Ser 120	Pro	Thr	Ser	Gln	Ile 125	Asp	Asn	Ile
Gly	Glu 130	Glu	Glu	Met	Asp	Ala 135	Ser	Thr	Thr	His	His 140	Lys	Arg	Lys	Thr
Met 145	Asn	Asp	Phe	Asp	Tyr 150	Leu	Lys	Leu	Leu	Gly 155	Lys	Gly	Thr	Phe	Gly 160
Lys	Val	Ile	Leu	Val 165	Arg	Glu	Lys	Ala	Ser 170	Gly	Lys	Tyr	Tyr	Ala 175	Met
Lys	Ile	Leu	Lys 180	Lys	Glu	Val	Ile	Ile 185	Ala	Lys	Asp	Glu	Val 190	Ala	His
Thr	Leu	Thr 195	Glu	Ser	Arg	Val	Leu 200	Lys	Asn	Thr	Arg	His 205	Pro	Phe	Leu
Thr	Ser 210	Leu	Lys	Tyr	Ser	Phe 215	Gln	Thr	Lys	Asp	Arg 220	Leu	Cys	Phe	Val
Met 225	Glu	Tyr	Val	Asn	Gly 230	Gly	Glu	Leu	Phe	Phe 235	His	Leu	Ser	Arg	Glu 240
Arg	Val	Phe	Ser	Glu 245	Asp	Arg	Thr	Arg	Phe 250	Tyr	Gly	Ala	Glu	Ile 255	Val
Ser	Ala	Leu	Asp 260	Tyr	Leu	His	Ser	Gly 265	Lys	Ile	Val	Tyr	Arg 270	Asp	Leu
Lys	Leu	Glu 275	Asn	Leu	Met	Leu	Asp 280	Lys	Asp	Gly	His	Ile 285	Lys	Ile	Thr
Asp	Phe 290	Gly	Leu	Cys	Lys	Glu 295	Gly	Ile	Thr	Asp	Ala 300	Ala	Thr	Met	Lys
305		-			Pro 310					315					320
Asn	Asp	Tyr	Gly	Arg 325	Ala	Val	Asp	Trp	Trp 330	Gly	Leu	Gly	Val	Val 335	Met
Tyr	Glu	Met	Met 340	Cys	Gly	Arg	Leu	Pro 345	Phe	Tyr	Asn	Gln	Asp 350	His	Glu
Lys	Leu	Phe 355	Glu	Leu	Ile	Leu	Met 360	Glu	Asp	Ile	Lys	Phe 365	Pro	Arg	Thr
Leu	Ser 370	Ser	Asp	Ala	Lys	Ser 375	Leu	Leu	Ser	Gly	Leu 380	Leu	Ile	Lys	Asp

Pro Asn Lys Arq Leu Gly Gly Gly Pro Asp Asp Ala Lys Glu Ile Met Arg His Ser Phe Phe Ser Gly Val Asn Trp Gln Asp Val Tyr Asp Lys Lys Leu Val Pro Pro Phe Lys Pro Gln Val Thr Ser Glu Thr Asp Thr Arg Tyr Phe Asp Glu Glu Phe Thr Ala Gln Thr Ile Thr Ile Thr Pro Pro Glu Lys Tyr Asp Glu Asp Gly Met Asp Cys Met Asp Asn Glu Arg 460 Arg Pro His Phe Pro Gln Phe Ser Tyr Ser Ala Ser Gly Arg Glu 470 475 <210> 249 <211> 685 <212> PRT<213> Homo sapiens <400> 249 Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys 5 Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asp Ser Lys Lys Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln 40 Ala Gln Val Pro Pro Ala Ala Pro His His His His His Ser His Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys 85 Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile 100 Ile Pro His Ser Arg Val Ala Lys Pro His Gln Arg Glu Lys Ile Asp 120 Lys Glu Ile Glu Leu His Arg Ile Leu His His Lys His Val Val Gln 130 Phe Tyr His Tyr Phe Glu Asp Lys Glu Asn Ile Tyr Ile Leu Leu Glu 145 150 155

Tyr Cys Ser Arg Arg Ser Met Ala His Ile Leu Lys Ala Arg Lys Val

Leu Thr Glu Pro Glu Val Arg Tyr Tyr Leu Arg Gln Ile Val Ser Gly Leu Lys Tyr Leu His Glu Gln Glu Ile Leu His Arg Asp Leu Lys Leu Gly Asn Phe Phe Ile Asn Glu Ala Met Glu Leu Lys Val Gly Asp Phe Gly Leu Ala Ala Arg Leu Glu Pro Leu Glu His Arg Arg Thr Ile Cys Gly Thr Pro Asn Tyr Leu Ser Pro Glu Val Leu Asn Lys Gln Gly His Gly Cys Glu Ser Asp Ile Trp Ala Leu Gly Cys Val Met Tyr Thr Met Leu Leu Gly Arg Pro Pro Phe Glu Thr Thr Asn Leu Lys Glu Thr Tyr Arg Cys Ile Arg Glu Ala Arg Tyr Thr Met Pro Ser Ser Leu Leu Ala Pro Ala Lys His Leu Ile Ala Ser Met Leu Ser Lys Asn Pro Glu Asp Arg Pro Ser Leu Asp Asp Ile Ile Arg His Asp Phe Phe Leu Gln Gly Phe Thr Pro Asp Arg Leu Ser Ser Ser Cys Cys His Thr Val Pro Asp Phe His Leu Ser Ser Pro Ala Lys Asn Phe Phe Lys Lys Ala Ala Ala Ala Leu Phe Gly Gly Lys Lys Asp Lys Ala Arg Tyr Ile Asp Thr His Asn Arg Val Ser Lys Glu Asp Glu Asp Ile Tyr Lys Leu Arg His Asp Leu Lys Lys Thr Ser Ile Thr Gln Gln Pro Ser Lys His Arg Thr Asp Glu Glu Leu Gln Pro Pro Thr Thr Val Ala Arg Ser Gly Thr Pro Ala Val Glu Asn Lys Gln Gln Ile Gly Asp Ala Ile Arg Met Ile Val Arg Gly Thr Leu Gly Ser Cys Ser Ser Ser Glu Cys Leu Glu Asp Ser Thr Met Gly Ser Val Ala Asp Thr Val Ala Arg Val Leu Arg Gly Cys Leu Glu Asn Met Pro Glu Ala Asp Cys Ile Pro Lys Glu Gln 485 490 495

Leu Ser Thr Ser Phe Gln Trp Val Thr Lys Trp Val Asp Tyr Ser Asn 500 505 510

Lys Tyr Glý Phe Gly Tyr Gln Leu Ser Asp His Thr Val Gly Val Leu 515 520 525

Phe Asn Asn Gly Ala His Met Ser Leu Leu Pro Asp Lys Lys Thr Val 530 535 540

His Tyr Tyr Ala Glu Leu Gly Gln Cys Ser Val Phe Pro Ala Thr Asp 545 550 555 560

Ala Pro Glu Gln Phe Ile Ser Gln Val Thr Val Leu Lys Tyr Phe Ser 565 570 575

His Tyr Met Glu Glu Asn Leu Met Asp Gly Gly Asp Leu Pro Ser Val 580 585 590

Thr Asp Ile Arg Arg Pro Arg Leu Tyr Leu Leu Gln Trp Leu Lys Ser 595 600 605

Asp Lys Ala Leu Met Met Leu Phe Asn Asp Gly Thr Phe Gln Val Asn 610 615 620

Phe Tyr His Asp His Thr Lys Ile Ile Ile Cys Ser Gln Asn Glu Glu 625 630 635 640

Tyr Leu Leu Thr Tyr Ile Asn Glu Asp Arg Ile Ser Thr Thr Phe Arg 645 650 655

Leu Thr Thr Leu Leu Met Ser Gly Cys Ser Ser Glu Leu Lys Asn Arg
660 665 670

Met Glu Tyr Ala Leu Asn Met Leu Leu Gln Arg Cys Asn 675 680 685

<210> 250

465

<211> 685

<212> PRT

<213> Homo sapiens

<400> 250

Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys
1 10 15

Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asp Ser Lys Lys 20 25 30

Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln
35 40 45

		•	_	_			_	'	•			·		_	
Ala	GIn 50	Val	Pro	Pro	Ala	A1a 55	Pro	His	His	His	H1S	HIS	His	Ser	His
Ser 65	Gly	Pro	Glu	Ile	Ser 70	Arg	Ile	Ile	Val	Asp 75	Pro	Thr	Thr	Gly	Lys 80
Arg	Tyr	Cys	Arg	Gly 85	Lys	Val	Leu	Gly	Lys 90	Gly	Gly	Phe	Ala	Lys 95	Cys
Tyr	Glu	Met	Thr 100	Asp	Leu	Thr	Asn	Asn 105	Lys	Val	Tyr	Ala	Ala 110	Lys	Ile
Ile	Pro	His 115	Ser	Arg	Val	Ala	Lys 120	Pro	His	Gln	Arg	Glu 125	Lys	Ile	Asp
Lys	Glu 130	Ile	Glu	Leu	His	Arg 135	Ile	Leu	His	His	Lys 140	His	Val	Val	Gln
Phe 145	Tyr	His	Tyr	Phe	Glu 150	Asp	Lys	Glu	Asn	Ile 155	Tyr	Ile	Leu	Leu	Glu 160
Tyr	Cys	Ser	Arg	Arg 165	Ser	Met	Ala	His	Ile 170	Leu	Lys	Ala	Arg	Lys 175	Val
Leu	Thr	Glu	Pro 180	Glu	Val	Arg	Tyr	Tyr 185	Leu	Arg	Gln	Ile	Val 190	Ser	Gly
Leu	Lys	Tyr 195	Leu	His	Glu	Gln	Glu 200	Ile	Leu	His	Arg	Asp 205	Leu	Lys	Leu
Gly	Asn 210	Phe	Phe	Ile	Asn	Glu 215	Ala	Met	Glu	Leu	Lys 220	Val	Gly	Asp	Phe
Gly 225	Leu	Ala	Ala	Arg	Leu 230	Glu	Pro	Leu	Glu	His 235	Arg	Arg	Arg	Thr	Ile 240
Cys	Gly	Thr	Pro	Asn 245	Tyr	Leu	Ser	Pro	Glu 250	Val	Leu	Asn	Lys	Gln 255	Gly
His	Gly	Cys	Glu 260	Ser	Asp	Ile	Trp	Ala 265	Leu	Gly	Cys	Val	Met 270	Tyr	Thr
Met	Leu	Leu 275	Gly	Arg	Pro	Pro	Phe 280	Glu	Thr	Thr	Asn	Leu 285	Lys	Glu	Thr
Tyr	Arg 290	Cys	Ile	Arg	Glu	Ala 295	Arg	Tyr	Thr	Met	Pro 300	Ser	Ser	Leu	Leu
Ala 305	Pro	Ala	Lys	His	Leu 310	Ile	Ala	Ser	Met	Leu 315	Ser	Lys	Asn	Pro	Glu 320
Asp	Arg	Pro	Ser	Leu 325	Asp	Asp	Ile	Ile	Arg 330	His	Asp	Phe	Phe	Leu 335	Gln
Gly	Phe	Thr	Pro 340	Asp	Arg	Leu	Ser	Ser 345	Ser	Cys	Cys	His	Thr 350	Val	Pro

.

Asp	Phe	His 355	Leu	Ser	Ser	Pro	Ala 360	Lys	Asn	Phe	Phe	Lys 365	Lys	Ala	Ala
Ala	Ala 370	Leu	Phe	Gly	Gly	Lys 375	Lys	Asp	Lys	Ala	Arg 380	Tyr	Ile	Asp	Thr
His 385	Asn	Arg	Val	Ser	Lys 390	Glu	Asp	Glu	Asp	Ile 395	Tyr	Lys	Leu	Arg	His 400
Asp	Leu	Lys	Lys	Thr 405	Ser	Ile	Thr	Gln	Gln 410	Pro	Ser	Lys	His	Arg 415	Thr
Asp	Glu	Glu	Leu 420	Gln	Pro	Pro	Thr	Thr 425	Thr	Val	Ala	Arg	Ser 430	Gly	Thr
Pro	Ala	Val 435	Glu	Asn	Lys	Gln	Gln 440	Ile	Gly	Asp	Ala	Ile 445	Arg	Met	Ile
Val	Arg 450	Gly	Thr	Leu	Gly	Ser 455	Cys	Ser	Ser	Ser	Ser 460	Glu	Cys	Leu	Glu
Asp 465	Ser	Thr	Met	Gly	Ser 470	Val	Ala	Asp	Thr	Val 475	Ala	Arg	Val	Leu	Arg 480
Gly	Cys	Leu	Glu	Asn 485	Met	Pro	Glu	Ala	Asp 490	Cys	Ile	Pro	Lys	Glu 495	Gln
Leu	Ser	Thr	Ser 500	Phe	Gln	Trp	Val	Thr 505	Lys	Trp	Val	Asp	Tyr 510	Ser	Asn
Lys	Tyr	Gly 515	Phe	Gly	Tyr	Gln	Leu 520	Ser	Asp	His	Thr	Val 525	Gly	Val	Leu
Phe	Asn 530	Asn	Gly	Ala	His	Met 535	Ser	Leu	Leu	Pro	Asp 540	Lys	Lys	Thr	Val
His 545	Tyr	Tyr	Ala	Glu	Leu 550	Gly	Gln	Cys	Ser	Val 555	Phe	Pro	Ala	Thr	Asp 560
Ala	Pro	Glu	Gln	Phe 565	Ile	Ser	Gln	Val	Thr 570	Val	Leu	Lys	Tyr	Phe 575	Ser
His	Tyr	Met	Glu 580	Glu	Asn	Leu	Met	Asp 585	Gly	Gly	Asp	Leu	Pro 590	Ser	Val
Thr	Asp	Ile 595	Arg	Arg	Pro	Arg	Leu 600	Tyr	Leu	Leu	Gln	Trp 605	Leu	Lys	Ser
Asp	Lys 610	Ala	Leu	Met	Met	Leu 615	Phe	Asn	Asp	Gly	Thr 620	Phe	Gln	Val	Asn
Phe 625	Tyr	His	Asp	His	Thr 630	Lys	Ile	Ile	Ile	Cys 635	Ser	Gln	Asn	Glu	Glu 640
Tyr	Leu	Leu	Thr	Tyr 645	Ile	Asn	Glu	Asp	Arg 650	Ile	Ser	Thr	Thr	Phe 655	Arg

Leu Thr Thr Leu Leu Met Ser Gly Cys Ser Ser Glu Leu Lys Asn Arg
660 665 670

Met Glu Tyr Ala Leu Asn Met Leu Leu Gln Arg Cys Asn 675 680 685

<210> 251

<211> 685

<212> PRT

<213> Homo sapiens

<400> 251

Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys 1 5 10 15

Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asp Ser Lys Lys 20 25 30

Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln 35 40 45

Ala Gln Val Pro Pro Ala Ala Pro His His His His His Ser His 50 55 60

Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys 70 75 80

Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys 85 90 95

Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile 100 105 110

Ile Pro His Ser Arg Val Ala Lys Pro His Gln Arg Glu Lys Ile Asp 115 120 125

Lys Glu Ile Glu Leu His Arg Ile Leu His His Lys His Val Val Gln 130 135 140

Phe Tyr His Tyr Phe Glu Asp Lys Glu Asn Ile Tyr Ile Leu Leu Glu 145 150 155 160

Tyr Cys Ser Arg Arg Ser Met Ala His Ile Leu Lys Ala Arg Lys Val 165 170 175

Leu Thr Glu Pro Glu Val Arg Tyr Tyr Leu Arg Gln Ile Val Ser Gly
180 185 190

Leu Lys Tyr Leu His Glu Gln Glu Ile Leu His Arg Asp Leu Lys Leu 195 200 205

Gly Asn Phe Phe Ile Asn Glu Ala Met Glu Leu Lys Val Gly Asp Phe 210 215 220

Gly Leu Ala Ala Arg Leu Glu Pro Leu Glu His Arg Arg Arg Thr Ile 225 230 235 240

Cys Gly Thr Pro Asn Tyr Leu Ser Pro Glu Val Leu Asn Lys Gln Gly His Gly Cys Glu Ser Asp Ile Trp Ala Leu Gly Cys Val Met Tyr Thr Met Leu Leu Gly Arg Pro Pro Phe Glu Thr Thr Asn Leu Lys Glu Thr Tyr Arg Cys Ile Arg Glu Ala Arg Tyr Thr Met Pro Ser Ser Leu Leu Ala Pro Ala Lys His Leu Ile Ala Ser Met Leu Ser Lys Asn Pro Glu 305 315 Asp Arg Pro Ser Leu Asp Asp Ile Ile Arg His Asp Phe Phe Leu Gln 330 Gly Phe Thr Pro Asp Arg Leu Ser Ser Ser Cys Cys His Thr Val Pro 345 Asp Phe His Leu Ser Ser Pro Ala Lys Asn Phe Phe Lys Lys Ala Ala 355 Ala Ala Leu Phe Gly Gly Lys Lys Asp Lys Ala Arg Tyr Ile Asp Thr His Asn Arg Val Ser Lys Glu Asp Glu Asp Ile Tyr Lys Leu Arg His 390 395 Asp Leu Lys Lys Thr Ser Ile Thr Gln Gln Pro Ser Lys His Arg Thr Asp Glu Glu Leu Gln Pro Pro Thr Thr Val Ala Arg Ser Gly Thr 425 Pro Ala Val Glu Asn Lys Gln Gln Ile Gly Asp Ala Ile Arg Met Ile 435 Val Arg Gly Thr Leu Gly Ser Cys Ser Ser Ser Glu Cys Leu Glu 455 Asp Ser Thr Met Gly Ser Val Ala Asp Thr Val Ala Arg Val Leu Arg 470 475 Gly Cys Leu Glu Asn Met Pro Glu Ala Asp Cys Ile Pro Lys Glu Gln 485 Leu Ser Thr Ser Phe Gln Trp Val Thr Lys Trp Val Asp Tyr Ser Asn 505 Lys Tyr Gly Phe Gly Tyr Gln Leu Ser Asp His Thr Val Gly Val Leu 515 Phe Asn Asn Gly Ala His Met Ser Leu Leu Pro Asp Lys Lys Thr Val 530 535

His Tyr Tyr Ala Glu Leu Gly Gln Cys Ser Val Phe Pro Ala Thr Asp Ala Pro Glu Gln Phe Ile Ser Gln Val Thr Val Leu Lys Tyr Phe Ser His Tyr Met Glu Glu Asn Leu Met Asp Gly Gly Asp Leu Pro Ser Val Thr Asp Ile Arg Arg Pro Arg Leu Tyr Leu Leu Gln Trp Leu Lys Ser 600 Asp Lys Ala Leu Met Met Leu Phe Asn Asp Gly Thr Phe Gln Val Asn 610 Phe Tyr His Asp His Thr Lys Ile Ile Cys Ser Gln Asn Glu Glu 635 Tyr Leu Leu Thr Tyr Ile Asn Glu Asp Arg Ile Ser Thr Thr Phe Arg 650 Leu Thr Thr Leu Leu Met Ser Gly Cys Ser Ser Glu Leu Lys Asn Arg 660 665 Met Glu Tyr Ala Leu Asn Met Leu Leu Gln Arg Cys Asn 675 680 <210> 252 <211> 305 <212> PRT <213> Homo sapiens <400> 252 Met Gly His Ala Leu Cys Val Cys Ser Arg Gly Thr Val Ile Ile Asp Asn Lys Arg Tyr Leu Phe Ile Gln Lys Leu Gly Glu Gly Phe Ser Tyr Val Asp Leu Val Glu Gly Leu His Asp Gly His Phe Tyr Ala Leu Lys Arg Ile Leu Cys His Glu Gln Gln Asp Arg Glu Glu Ala Gln Arg Glu Ala Asp Met His Arg Leu Phe Asn His Pro Asn Ile Leu Arg Leu Val Ala Tyr Cys Leu Arg Glu Arg Gly Ala Lys His Glu Ala Trp Leu 85 Leu Leu Pro Phe Phe Lys Arg Gly Thr Leu Trp Asn Glu Ile Glu Arg 100 Leu Lys Asp Lys Gly Asn Phe Leu Thr Glu Asp Gln Ile Leu Trp Leu 115 120 125

Leu Leu Gly Ile Cys Arg Gly Leu Glu Ala Ile His Ala Lys Gly Tyr 130 135 140

Ala His Arg Asp Leu Lys Pro Thr Asn Ile Leu Leu Gly Asp Glu Gly 145 150 155 160

Gln Pro Val Leu Met Asp Leu Gly Ser Met Asn Gln Ala Cys Ile His 165 170 175

Val Glu Gly Ser Arg Gln Ala Leu Thr Leu Gln Asp Trp Ala Ala Gln 180 185 190

Arg Cys Thr Ile Ser Tyr Arg Ala Pro Glu Leu Phe Ser Val Gln Ser 195 200 205

His Cys Val Ile Asp Glu Arg Thr Asp Val Trp Ser Phe Gly Cys Val 210 215 220

Leu Tyr Ala Met Met Phe Gly Glu Gly Pro Tyr Asp Met Val Phe Gln 225 230 235 240

Lys Gly Asp Ser Val Ala Leu Ala Val Gln Asn Gln Leu Ser Ile Pro 245 250 255

Gln Ser Pro Arg His Ser Ser Ala Leu Arg Gln Leu Leu Asn Ser Met 260 265 270

Met Thr Val Asp Pro His Gln Arg Pro His Ile Pro Leu Leu Leu Ser 275 280 285

Gln Leu Glu Ala Leu Gln Pro Pro Ala Pro Gly Gln His Thr Thr Gln 290 295 300

Ile 305

<210> 253

<211> 1115

<212> PRT

<213> Homo sapiens

<400> 253

Met Glu Arg Ala Ile Ser Pro Gly Leu Leu Val Arg Ala Leu Leu Leu 1 5 10 15

Leu Leu Leu Gly Leu Ala Ala Arg Thr Val Ala Ala Gly Arg Ala
20 25 30

Arg Gly Leu Pro Ala Pro Thr Ala Glu Ala Ala Phe Gly Leu Gly Ala 35 40 45

Ala Ala Ala Pro Thr Ser Ala Thr Arg Val Pro Ala Ala Gly Ala Val 50 55 60

Ala Ala Ala 65	Glu Val	Thr Val	. Glu	Asp	Ala	Glu 75	Ala	Leu	Pro	Ala	Ala 80
Ala Gly Glu	Gln Glu 85	Pro Arg	g Gly	Pro	Glu 90	Pro	Asp	Asp	Glu	Thr 95	Glu
Leu Arg Pro	Arg Gly 100	Arg Sei	Leu	Val 105	Ile	Ile	Ser	Thr	Leu 110	Asp	Gly
Arg Ile Ala 115	Ala Leu	Asp Pro	Glu 120	Asn	His	Gly	Lys	Lys 125	Gln	Trp	Asp
Leu Asp Val 130	Gly Ser	Gly Ser 135		Val	Ser	Ser	Ser 140	Leu	Ser	Lys	Pro
Glu Val Phe 145	Gly Asn	Lys Met 150	: Ile	Ile	Pro	Ser 155	Leu	Asp	Gly	Ala	Leu 160
Phe Gln Trp	Asp Arg 165	Asp Arg	g Glu	Ser	Met 170	Glu	Thr	Val	Pro	Phe 175	Thr
Val Glu Ser	Leu Leu 180	Glu Ser	s Ser	Tyr 185	Lys	Phe	Gly	Asp	Asp 190	Val	Val
Leu Val Gly 195	Gly Lys	Ser Le	1 Thr 200	Thr	Tyr	Gly	Leu	Ser 205	Ala	Tyr	Ser
Gly Lys Val 210	Arg Tyr	Ile Cys		Ala	Leu	Gly	Cys 220	Arg	Gln	Trp	Asp
Ser Asp Glu 225	Met Glu	Gln Glu 230	ı Glu	Asp	Ile	Leu 235	Leu	Leu	Gln	Arg	Thr 240
Gln Lys Thr	Val Arg 245	Ala Va	l Gly	Pro	Arg 250	Ser	Gly	Asn	Glu	Lys 255	Trp
Asn Phe Ser	Val Gly 260	His Phe	e Glu	Leu 265	Arg	Tyr	Ile	Pro	Asp 270	Met	Glu
Thr Arg Ala 275	Gly Phe	Ile Gl	1 Ser 280	Thr	Phe	Lys	Pro	Asn 285	Glu	Asn	Thr
Glu Glu Ser 290	Lys Ile	Ile Ser 29	_	Val	Glu	Glu	Gln 300	Glu	Ala	Ala	Ile
Met Asp Ile 305	Val Ile	Lys Val	l Ser	Val	Ala	Asp 315	Trp	Lys	Val	Met	Ala 320
Phe Ser Lys	Lys Gly 325	Gly His	s Leu	Glu	Trp 330	Glu	Tyr	Gln	Phe	Cys 335	Thr
Pro Ile Ala	Ser Ala 340	Trp Le	ı Leu	Lys 345	Asp	Gly	Lys	Val	Ile 350	Pro	Ile
Ser Leu Phe 355	Asp Asp	Thr Se	7 Tyr 360		Ser	Asn	Asp	Asp 365	Val	Leu	Glu

Asp Glu Glu Asp Ile Val Glu Ala Ala Arg Gly Ala Thr Glu Asn Ser 370 375 380

Val Tyr Leu Gly Met Tyr Arg Gly Gln Leu Tyr Leu Gln Ser Ser Val 385 390 395 400

Arg Ile Ser Glu Lys Phe Pro Ser Ser Pro Lys Ala Leu Glu Ser Val 405 410 415

Thr Asn Glu Asn Ala Ile Ile Pro Leu Pro Thr Ile Lys Trp Lys Pro 420 425 430

Leu Ile His Ser Pro Ser Arg Thr Pro Val Leu Val Gly Ser Asp Glu
435 440 445

Phe Asp Lys Cys Leu Ser Asn Asp Lys Phe Ser His Glu Glu Tyr Ser 450 455 460

Asn Gly Ala Leu Ser Ile Leu Gln Tyr Pro Tyr Asp Asn Gly Tyr Tyr 465 470 475 480

Leu Pro Tyr Tyr Lys Arg Glu Arg Asn Lys Arg Ser Thr Gln Ile Thr 485 490 495

Val Arg Phe Leu Asp Asn Pro His Tyr Asn Lys Asn Ile Arg Lys Lys 500 505 510

Asp Pro Val Leu Leu His Trp Trp Lys Glu Ile Val Ala Thr Ile 515 520 525

Leu Phe Cys Ile Ile Ala Thr Thr Phe Ile Val Arg Arg Leu Phe His 530 540

Pro His Pro His Arg Gln Arg Lys Glu Ser Glu Thr Gln Cys Gln Thr 545 550 555 560

Glu Asn Lys Tyr Asp Ser Val Ser Gly Glu Ala Asn Asp Ser Ser Trp 565 570 575

Asn Asp Ile Lys Asn Ser Gly Tyr Ile Ser Arg Tyr Leu Thr Asp Phe 580 585 590

Glu Pro Ile Gln Cys Leu Gly Arg Gly Gly Phe Gly Val Val Phe Glu
595 600 605

Ala Lys Asn Lys Val Asp Asp Cys Asn Tyr Ala Ile Lys Arg Ile Arg 610 615 620

Leu Pro Asn Arg Glu Leu Ala Arg Glu Lys Val Met Arg Glu Val Lys 625 630 635 640

Ala Leu Ala Lys Leu Glu His Pro Gly Ile Val Arg Tyr Phe Asn Ala 645 650 655

Trp Leu Glu Ala Pro Pro Glu Lys Trp Gln Glu Lys Met Asp Glu Ile 660 665 670

Trp	Leu	Lys 675	Asp	Glu	Ser	Thr	Asp 680	Trp	Pro	Leu	Ser	Ser 685	Pro	Ser	Pro
Met	Asp 690	Ala	Pro	Ser	Val	Lys 695	Ile	Arg	Arg	Met	Asp 700	Pro	Phe	Ser	Thr
Lys 705	Glu	His	Ile	Glu	Ile 710	Ile	Ala	Pro	Ser	Pro 715	Gln	Arg	Ser	Arg	Ser 720
Phe	Ser	Val	Gly	Ile 725	Ser	Cys	Asp	Gln	Thr 730	Ser	Ser	Ser	Glu	Ser 735	Gln
Phe	Ser	Pro	Leu 740	Glu	Phe	Ser	Gly	Met 745	Asp	His	Glu	Asp	Ile 750	Ser	Glu
Ser	Val	Asp 755	Ala	Ala	Tyr	Asn	Leu 760	Gln	Asp	Ser	Cys	Leu 765	Thr	Asp	Cys
Asp	Val 770	Glu	Asp	Gly	Thr	Met 775	Asp	Gly	Asn	Asp	Glu 780	Gly	His	Ser	Phe
Glu 785	Leu	Cys	Pro	Ser	Glu 790	Ala	Ser	Pro	Tyr	Val 795	Arg	Ser	Arg	Glu	Arg 800
Thr	Ser	Ser	Ser	Ile 805	Val	Phe	Glu	Asp	Ser 810	Gly	Cys	Asp	Asn	Ala 815	Ser
Ser	Lys	Glu	Glu 820	Pro	Lys	Thr	Asn	Arg 825	Leu	His	Ile	Gly	Asn 830	His	Cys
Ala	Asn	Lys 835	Leu	Thr	Ala	Phe	Lys 840	Pro	Thr	Ser	Ser	Lys 845	Ser	Ser	Ser
Glu	Ala 850	Thr	Leu	Ser	Ile	Ser 855	Pro	Pro	Arg	Pro	Thr 860	Thr	Leu	Ser	Leu
Asp 865	Leu	Thr	Lys	Asn	Thr 870	Thr	Glu	Lys	Leu	Gln 875	Pro	Ser	Ser	Pro	Lys 880
Val	Tyr	Leu	Tyr	Ile 885	Gln	Met	Gln	Leu	Cys 890	Arg	Lys	Glu	Asn	Leu 895	Lys
Asp	Trp	Met	Asn 900	Gly	Arg	Cys	Thr	Ile 905	Glu	Glu	Arg	Glu	Arg 910	Ser	Val
Cys	Leu	His 915	Ile	Phe	Leu	Gln	Ile 920	Ala	Glu	Ala	Val	Glu 925	Phe	Leu	His
Ser	Lys 930	Gly	Leu	Met	His	Arg 935	Asp	Leu	Lys	Pro	Ser 940	Asn	Ile	Phe	Phe
Thr 945	Met	Asp	Asp	Val	Val 950	Lys	Val	Gly	Asp	Phe 955	Gly	Leu	Val	Thr	Ala 960
Met	Asp	Gln	Asp	Glu 965	Glu	Glu	Gln	Thr	Val 970	Leu	Thr	Pro	Met	Pro 975	Ala

- Tyr Ala Arg His Thr Gly Gln Val Gly Thr Lys Leu Tyr Met Ser Pro 980 985 990
- Glu Gln Ile His Gly Asn Ser Tyr Ser His Lys Val Asp Ile Phe Ser 995 1000 1005
- Leu Gly Leu Ile Leu Phe Glu Leu Leu Tyr Pro Phe Ser Thr Gln 1010 1015 1020
- Met Glu Arg Val Arg Thr Leu Thr Asp Val Arg Asn Leu Lys Phe 1025 1030 1035
- Pro Pro Leu Phe Thr Gln Lys Tyr Pro Cys Glu Tyr Val Met Val 1040 1045 1050
- Gln Asp Met Leu Ser Pro Ser Pro Met Glu Arg Pro Glu Ala Ile 1055 1060 1065
- Asn Ile Ile Glu Asn Ala Val Phe Glu Asp Leu Asp Phe Pro Gly 1070 1075 1080
- Lys Thr Val Leu Arg Gln Arg Ser Arg Ser Leu Ser Ser Gly 1085 1090 1095
- Thr Lys His Ser Arg Gln Ser Asn Asn Ser His Ser Pro Leu Pro 1100 1105 1110

Ser Asn 1115

<210> 254

<211> 743

<212> PRT

<213> Homo sapiens

<400> 254

- Met Gly Ser Arg Ala Gln Lys Ser Ala Gly Asn Ala Glu Leu Trp Glu
 1 5 10 15
- Pro Leu Pro Glu Gly Arg Pro Arg Pro Ala Gly Thr Ser Ser Ala Val 20 25 30
- Ser Ala Trp Ala Ser Leu Lys Leu Cys Leu Arg Gly Gly Ser Gly Arg 35 40 45
- Arg Gln Arg Leu Gly Gly Gly Arg Met Gln Pro Glu Glu Gly His Arg
 50 60
- Leu Ala Ala Gly Ala Ala Val Arg Gly Ala Ala Ala Thr Val Leu Leu 65 70 75 80
- Arg Leu Arg Asp Asp Leu Asn Val Thr Arg Leu Ser His Phe Glu Tyr 85 90 95
- Val Lys Asn Glu Asp Leu Glu Lys Ile Gly Met Gly Arg Pro Gly Gln
 100 105 110

Arg	Arg	Leu 115	Trp	Glu	Ala	Val	Lys 120	Arg	Arg	Lys	Ala	Leu 125	Cys	Lys	Arg
Lys	Ser 130	Trp	Met	Asn	Lys	Val 135	Phe	Ser	Gly	Lys	Arg 140	Leu	Glu	Ala	Glu
Phe 145	Pro	Pro	His	His	Ser 150	Gln	Ser	Thr	Phe	Arg 155	Lys	Thr	Ser	Pro	Ala 160
Pro	Gly	Gly	Pro	Ala 165	Gly	Glu	Gly	Pro	Leu 170	Gln	Ser	Leu	Thr	Cys 175	Leu
Ile	Gly	Glu	Lys 180	Asp	Leu	Arg	Leu	Leu 185	Glu	Lys	Leu	Gly	Asp 190	Gly	Ser
Phe	Gly	Val 195	Val	Arg	Arg	Gly	Glu 200	Trp	Asp	Ala	Pro	Ser 205	Gly	Lys	Thr
Val	Ser 210	Pro	Pro	Gln	Pro	Ala 215	Phe	Phe	Thr	Gln	Lys 220	Pro	Thr	Tyr	Asp
Pro 225	Val	Ser	Glu	Asp	Gln 230	Asp	Pro	Leu	Ser	Ser 235	Asp	Phe	Lys	Arg	Leu 240
Gly	Leu	Arg	Lys	Pro 245	Gly	Leu	Pro	Arg	Gly 250	Leu	Trp	Leu	Ala	Lys 255	Pro
Ser	Ala	Arg	Val 260	Pro	Gly	Thr	Lys	Ala 265	Ser	Arg	Gly	Ser	Gly 270	Ala	Glu
Val	Thr	Leu 275	Ile	Asp	Phe	Gly	Glu 280	Glu	Pro	Val	Val	Pro 285	Ala	Leu	Arg
Pro	Cys 290	Ala	Pro	Ser	Leu	Ala 295	Gln	Leu	Ala	Met	Asp 300	Ala	Cys	Ser	Leu
Leu 305	Asp	Glu	Thr	Pro	Pro 310	Gln	Ser	Pro	Thr	Arg 315	Ala	Leu	Pro	Arg	Pro 320
Leu	His	Pro	Thr	Pro 325	Val	Val	Asp	Trp	Asp 330	Ala	Arg	Pro	Leu	Pro 335	Pro
Pro	Pro	Ala	Tyr 340	Asp	Asp	Val	Ala	Gln 345	Asp	Glu	Asp	Asp	Phe 350	Glu	Ile
Cys	Ser	Ile 355	Asn	Ser	Thr	Leu	Val 360	Gly	Ala	Gly	Val	Pro 365	Ala	Gly	Pro
Ser	Gln 370	Gly	Gln	Thr	Asn	Tyr 375	Ala	Phe	Val	Pro	Glu 380	Gln	Ala	Arg	Pro
Pro 385	Pro	Pro	Leu	Glu	Asp 390	Asn	Leu	Phe	Leu	Pro 395	Pro	Gln	Gly	Gly	Gly 400
Lys	Pro	Pro	Ser	Ser 405	Ala	Gln	Thr	Ala	Glu 410	Ile	Phe	Gln	Ala	Leu 415	Gln

Gln	Glu	Cys	Met 420	Arg	GIn	Leu	GIn	A1a 425	Pro	Ala	GIY	Ser	430	Ala	Pro
Ser	Pro	Ser 435	Pro	Gly	Gly	Asp	Asp 440	Lys	Pro	Gln	Val	Pro 445	Pro	Arg	Val
Pro	Ile 450	Pro	Pro	Arg	Pro	Thr 455	Arg	Pro	His	Val	Gln 460	Leu	Ser	Pro	Ala
Pro 465	Pro	Gly	Glu	Glu	Glu 470	Thr	Ser	Gln	Trp	Pro 475	Gly	Pro	Ala	Ser	Pro 480
Pro	Arg	Val	Pro	Pro 485	Arg	Glu	Pro	Leu	Ser 490	Pro	Gln	Gly	Ser	Arg 495	Thr
Pro	Ser	Pro	Leu 500	Val	Pro	Pro	Gly	Ser 505	Ser	Pro	Leu	Pro	Pro 510	Arg	Leu
Ser	Ser	Ser 515	Pro	Gly	Lys	Thr	Met 520	Pro	Thr	Thr	Gln	Ser 525	Phe	Ala	Ser
Asp	Pro 530	Lys	Tyr	Ala	Thr	Pro 535	Gln	Val	Ile	Gln	Ala 540	Pro	Gly	Pro	Arg
Ala 545	Gly	Pro	Cys	Ile	Leu 550	Pro	Ile	Val	Arg	Asp 555	Gly	Lys	Lys	Val	Ser 560
Ser	Thr	His	Tyr	Tyr 565	Leu	Leu	Pro	Glu	Arg 570	Pro	Ser	Tyr	Leu	Glu 575	Arg
Tyr	Gln	Arg	Phe 580	Leu	Arg	Glu	Ala	Gln 585	Ser	Pro	Glu	Glu	Pro 590	Thr	Pro
Leu	Pro	Val 595	Pro	Leu	Leu	Leu	Pro 600	Pro	Pro	Ser	Thr	Pro 605	Ala	Pro	Ala
Ala	Pro 610	Thr	Ala	Thr	Val	Arg 615	Pro	Met	Pro	Gln	Ala 620	Ala	Leu	Asp	Pro
Lys 625	Ala	Asn	Phe	Ser	Thr 630	Asn	Asn	Ser	Asn	Pro 635	Gly	Ala	Arg	Pro	Pro 640
Pro	Pro	Arg	Ala	Thr 645	Ala	Arg	Leu	Pro	Gln 650	Arg	Gly	Cys	Pro	Gly 655	Asp
Gly	Pro	Glu	Ala 660	Gly	Arg	Pro	Ala	Asp 665	Lys	Ile	Gln	Met	Ala 670	Met	Val
His	Gly	Val 675	Thr	Thr	Glu	Glu	Cys 680	Gln	Ala	Ala	Leu	Gln 685	Сув	His	Gly
Trp	Ser 690	Val	Gln	Arg	Ala	Cys 695	Pro	Val	Ser	Glu	Gly 700	Gly	Ala	Ala	Leu
Arg 705	Ala	Gly	Ser	Ala	Ala 710	Gln	Arg	Glu	Cys	His 715	Lys	Val	Leu	Glu	Met 720

-

Phe Asp Trp Asn Leu Glu Gln Ala Gly Cys His Leu Leu Gly Ser Trp
725 730 735

Gly Pro Ala His His Lys Arg 740

<210> 255

<211> 1036

<212> PRT

<213> Homo sapiens

<400> 255

Met Gln Pro Glu Glu Gly Thr Gly Trp Leu Leu Glu Leu Leu Ser Glu
1 5 10 15

Val Gln Leu Gln Gln Tyr Phe Leu Arg Leu Arg Asp Asp Leu Asn Val 20 25 30

Thr Arg Leu Ser His Phe Glu Tyr Val Lys Asn Glu Asp Leu Glu Lys
35 40 45

Ile Gly Met Gly Arg Pro Gly Gln Arg Arg Leu Trp Glu Ala Val Lys 50 55 60

Arg Arg Lys Ala Leu Cys Lys Arg Lys Ser Trp Met Ser Lys Val Phe 70 75 80

Ser Gly Lys Arg Leu Glu Ala Glu Phe Pro Pro His His Ser Gln Ser 85 90 95

Thr Phe Arg Lys Thr Ser Pro Ala Pro Gly Gly Pro Ala Gly Glu Gly
100 105 110

Pro Leu Gln Ser Leu Thr Cys Leu Ile Gly Glu Lys Asp Leu Arg Leu 115 120 125

Leu Glu Lys Leu Gly Asp Gly Ser Phe Gly Val Val Arg Arg Gly Glu 130 135 140

Trp Asp Ala Pro Ser Gly Lys Thr Val Ser Val Ala Val Lys Cys Leu 145 150 155 160

Lys Pro Asp Val Leu Ser Gln Pro Glu Ala Met Asp Asp Phe Ile Arg 165 170 175

Glu Val Asn Ala Met His Ser Leu Asp His Arg Asn Leu Ile Arg Leu 180 185 190

Tyr Gly Val Val Leu Thr Pro Pro Met Lys Met Val Thr Glu Leu Ala 195 200 205

Pro Leu Gly Ser Leu Leu Asp Arg Leu Arg Lys His Gln Gly His Phe 210 220

Leu Leu Gly Thr Leu Ser Arg Tyr Ala Val Gln Val Ala Glu Gly Met

Gly Tyr Leu Glu Ser Lys Arg Phe Ile His Arg Asp Leu Ala Ala Arg 245 250 255

Asn Leu Leu Ala Thr Arg Asp Leu Val Lys Ile Gly Asp Phe Gly 260 265 270

Leu Met Arg Ala Leu Pro Gln Asn Asp Asp His Tyr Val Met Gln Glu 275 280 285

His Arg Lys Val Pro Phe Ala Trp Cys Ala Pro Glu Ser Leu Lys Thr 290 295 300

Arg Thr Phe Ser His Ala Ser Asp Thr Trp Met Phe Gly Val Thr Leu 305 310 315 320

Trp Glu Met Phe Thr Tyr Gly Gln Glu Pro Trp Ile Gly Leu Asn Gly 325 330 335

Ser Gln Ile Leu His Lys Ile Asp Lys Glu Gly Glu Arg Leu Pro Arg 340 345 350

Pro Glu Asp Cys Pro Gln Asp Ile Tyr Asn Val Met Val Gln Cys Trp 355 360 365

Ala His Lys Pro Glu Asp Arg Pro Thr Phe Val Ala Leu Arg Asp Phe 370 380

Leu Leu Glu Ala Gln Pro Thr Asp Met Arg Ala Leu Gln Asp Phe Glu 385 390 395 400

Glu Pro Asp Lys Leu His Ile Gln Met Asn Asp Val Ile Thr Val Ile 405 410 415

Glu Gly Arg Ala Glu Asn Tyr Trp Trp Arg Gly Gln Asn Thr Arg Thr 420 425 430

Leu Cys Val Gly Pro Phe Pro Arg Asn Val Val Thr Ser Val Ala Gly
435 440 445

Leu Ser Ala Gln Asp Ile Ser Gln Pro Leu Gln Asn Ser Phe Ile His 450 455 460

Thr Gly His Gly Asp Ser Asp Pro Arg His Cys Trp Gly Phe Pro Asp 465 470 475 480

Arg Ile Asp Glu Leu Tyr Leu Gly Asn Pro Met Asp Pro Pro Asp Leu 485 490 495

Leu Ser Val Glu Leu Ser Thr Ser Arg Pro Pro Gln His Leu Gly Gly 500 505 510

Val Lys Lys Pro Thr Tyr Asp Pro Val Ser Glu Asp Gln Asp Pro Leu 515 520 525

Ser Ser Asp Phe Lys Arg Leu Gly Leu Arg Lys Pro Gly Leu Pro Arg

Gly 545	Leu	Trp	Leu	Ala	Lys 550	Pro	Ser	Ala	Arg	Val 555	Pro	Gly	Thr	Lys	Ala 560
Ser	Arg	Gly	Ser	Gly 565	Ala	Glu	Val	Thr	Leu 570	Ile	Asp	Phe	Gly	Glu 575	Glu
Pro	Val	Val	Pro 580	Ala	Leu	Arg	Pro	Cys 585	Pro	Pro	Ser	Leu	Ala 590	Gln	Leu
Ala	Met	Asp 595	Ala	Cys	Ser	Leu	Leu 600	Asp	Glu	Thr	Pro	Pro 605	Gln	Ser	Pro
Thr	Arg 610	Ala	Leu	Pro	Arg	Pro 615	Leu	His	Pro	Thr	Pro 620	Val	Val	Asp	Trp
Asp 625	Ala	Arg	Pro	Leu	Pro 630	Pro	Pro	Pro	Ala	Tyr 635	Asp	Asp	Val	Ala	Gln 640
Asp	Glu	Asp	Asp	Phe 645	Glu	Ile	Cys	Ser	Ile 650	Asn	Ser	Thr	Leu	Val 655	Gly
Ala	Gly	Val	Pro 660	Ala	Gly	Pro	Ser	Gln 665	Gly	Gln	Thr	Asn	Tyr 670	Ala	Phe
Val	Pro	Glu 675	Gln	Ala	Arg	Pro	Pro 680	Pro	Pro	Leu	Glu	Asp 685	Asn	Leu	Phe
Leu	Pro 690	Pro	Gln	Gly	Gly	Gly 695	Lys	Pro	Pro	Ser	Ser 700	Ala	Gln	Thr	Ala
Glu 705	Ile	Phe	Gln	Ala	Leu 710	Gln	Gln	Glu	Cys	Met 715	Arg	Gln	Leu	Gln	Ala 720
	-			725	Pro				730			_	_	735	
			740		Val			745					750		
		755			Ala		760					765			
	770				Pro	775					780				
785		-			Thr 790					795					800
Pro	Leu	Pro	Pro	Arg 805	Leu	Ser	Ser	Ser	Pro 810	Gly	Lys	Thr	Met	Pro 815	Thr
Thr	Gln	Ser	Phe	Ala	Ser	Asp	Pro	Lys	Tyr	Ala	Thr	Pro	Gln	Val	Ile

Gln Ala Pro Gly Ala Gly Gly Pro Cys Ile Leu Pro Ile Val Arg Asp

835 840 845

Gly Lys Lys Val Ser Ser Thr His Tyr Tyr Leu Leu Pro Glu Arg Pro 850 855 860

Ser Tyr Leu Glu Arg Tyr Gln Arg Phe Leu Arg Glu Ala Gln Ser Pro 865 870 875 880

Glu Glu Pro Thr Pro Leu Pro Val Pro Leu Leu Pro Pro Pro Ser 885 890 895

Thr Pro Ala Pro Ala Ala Pro Thr Ala Thr Val Arg Pro Met Pro Gln
900 905 910

Ala Ala Leu Asp Pro Lys Ala Asn Phe Ser Thr Asn Asn Ser Asn Pro 915 920 925

Gly Ala Arg Pro Pro Pro Pro Arg Ala Thr Ala Arg Leu Pro Gln Arg 930 935 940

Gly Cys Pro Gly Asp Gly Pro Glu Ala Gly Arg Pro Ala Asp Lys Ile 945 950 955 960

Gln Met Ala Met Val His Gly Val Thr Thr Glu Glu Cys Gln Ala Ala 965 970 975

Leu Gln Cys His Gly Trp Ser Val Gln Arg Ala Ala Gln Tyr Leu Lys 980 985 990

Val Glu Gln Leu Phe Gly Leu Gly Leu Arg Pro Arg Gly Glu Cys His 995 1000 1005

Lys Val Leu Glu Met Phe Asp Trp Asn Leu Glu Gln Ala Gly Cys 1010 1015 1020

His Leu Leu Gly Ser Trp Gly Pro Ala His His Lys Arg 1025 1030 1035

<210> 256

<211> 1036

<212> PRT

<213> Homo sapiens

<400> 256

Met Gln Pro Glu Glu Gly Thr Gly Trp Leu Leu Glu Leu Leu Ser Glu
1 5 10 15

Val Gln Leu Gln Gln Tyr Phe Leu Arg Leu Arg Asp Asp Leu Asn Val 20 25 30

Thr Arg Leu Ser His Phe Glu Tyr Val Lys Asn Glu Asp Leu Glu Lys
35 40 45

Ile Gly Met Gly Arg Pro Gly Gln Arg Arg Leu Trp Glu Ala Val Lys 50 55 60

Arg Arg Lys 65	Ala Leu	Cys Lys	arg	Lys	Ser	Trp 75	Met	Ser	Lys	Val	Phe 80
Ser Gly Lys	Arg Leu 85	Glu Ala	a Glu	Phe	Pro 90	Pro	His	His	Ser	Gln 95	Ser
Thr Phe Arg	Lys Thr 100	Ser Pro) Ala	Pro 105	Gly	Gly	Pro	Ala	Gly 110	Glu	Gly
Pro Leu Gln 115	Ser Leu	Thr Cy	120	Ile	Gly	Glu	Lys	Asp 125	Leu	Arg	Leu
Leu Glu Lys 130	Leu Gly	Asp Gly		Phe	Gly	Val	Val 140	Arg	Arg	Gly	Glu
Trp Asp Ala 145	Pro Ser	Gly Lys	s Thr	Val	Ser	Val 155	Ala	Val	Lys	Cys	Leu 160
Lys Pro Asp	Val Leu 165	Ser Gl	n Pro	Glu	Ala 170	Met	Asp	Asp	Phe	Ile 175	Arg
Glu Val Asn	Ala Met 180	His Se	c Leu	Asp 185	His	Arg	Asn	Leu	Ile 190	Arg	Leu
Tyr Gly Val 195	Val Leu	Thr Pro	200	Met	Lys	Met	Val	Thr 205	Glu	Leu	Ala
Pro Leu Gly 210	Ser Leu	Leu Asy 21	_	Leu	Arg	Lys	His 220	Gln	Gly	His	Phe
Leu Leu Gly 225	Thr Leu	Ser Arg	y Tyr	Ala	Val	Gln 235	Val	Ala	Glu	Gly	Met 240
Gly Tyr Leu	Glu Ser 245	Lys Ar	g Phe	Ile	His 250	Arg	Asp	Leu	Ala	Ala 255	Arg
Asn Leu Leu	Leu Ala 260	Thr Ar	g Asp	Leu 265	Val	Lys	Ile	Gly	Asp 270	Phe	Gly
Leu Met Arg 275	Ala Leu	Pro Gl	n Asn 280	Asp	Asp	His	Tyr	Val 285	Met	Gln	Glu
His Arg Lys 290	Val Pro	Phe Ala 29	_	Cys	Ala	Pro	Glu 300	Ser	Leu	Lys	Thr
Arg Thr Phe 305	Ser His	Ala Se	r Asp	Thr	Trp	Met 315	Phe	Gly	Val	Thr	Leu 320
Trp Glu Met	Phe Thr 325	Tyr Gl	y Gln	Glu	Pro 330	Trp	Ile	Gly	Leu	Asn 335	Gly
Ser Gln Ile	Leu His 340	Lys Il	e Asp	Lys 345	Glu	Gly	Glu	Arg	Leu 350	Pro	Arg
Pro Glu Asp 355	Cys Pro	Gln As	9 Ile 360	Tyr	Asn	Val	Met	Val 365	Gln	Cys	Trp

Ala	His 370	Lys	Pro	Glu	Asp	Arg 375	Pro	Thr	Phe	Val	Ala 380	Leu	Arg	Asp	Phe	
Leu 385	Leu	Glu	Ala	Gln	Pro 390	Thr	Asp	Met	Arg	Ala 395	Leu	Gln	Asp	Phe	Glu 400	
Glu	Pro	Asp	Lys	Leu 405	His	Ile	Gln	Met	Asn 410	Asp	Val	Ile	Thr	Val 415	Ile	
Glu	Gly	Arg	Ala 420	Glu	Asn	Tyr	Trp	Trp 425	Arg	Gly	Gln	Asn	Thr 430	Arg	Thr	
Leu	Cys	Val 435	Gly	Pro	Phe	Pro	Arg 440	Asn	Val	Val	Thr	Ser 445	Val	Ala	Gly	
Leu	Ser 450	Ala	Gln	Asp	Ile	Ser 455	Gln	Pro	Leu	Gln	Asn 460	Ser	Phe	Ile	His	
Thr 465	Gly	His	Gly	Asp	Ser 470	Asp	Pro	Arg	His	Cys 475	Trp	Gly	Phe	Pro	Asp 480	
Arg	Ile	Asp	Glu	Leu 485	Tyr	Leu	Gly	Asn	Pro 490	Met	Asp	Pro	Pro	Asp 495	Leu	
			500					505			Gln		510	_		
	-	515			_	_	520				Asp	525	-			
	530	_		_		535					Pro 540					
545		_			550					555	Pro	_		_	560	
		_		565					570		Asp			575		
			580					585			Ser		590			
		595		-			600	_			Pro	605				
	610					615					Pro 620					
625	•				630					635	Asp	_			640	
				645					650		Ser			655	_	
Ala	Gly	Val	Pro 660	Ala	Gly	Pro	Ser	Gln 665	Gly	Gln	Thr	Asn	Tyr 670	Ala	Phe	

Val	Pro	Glu 675	Gln	Ala	Arg	Pro	Pro 680	Pro	Pro	Leu	Glu	Asp 685	Asn	Leu	Phe
Leu	Pro 690	Pro	Gln	Gly	Gly	Gly 695	Lys	Pro	Pro	Ser	Ser 700	Ala	Gln	Thr	Ala
Glu 705	Ile	Phe	Gln	Ala	Leu 710	Gln	Gln	Glu	Cys	Met 715	Arg	Gln	Leu	Gln	Ala 720
Pro	Gly	Ser	Pro	Ala 725	Pro	Ser	Pro	Ser	Pro 730	Gly	Gly	Asp	Asp	Lys 735	Pro
Gln	Val	Pro	Pro 740	Arg	Val	Pro	Ile	Pro 745	Pro	Arg	Pro	Thr	Arg 750	Pro	His
Val	Gln	Leu 755	Ser	Pro	Ala	Pro	Pro 760	Gly	Glu	Glu	Glu	Thr 765	Ser	Gln	Trp
Pro	Gly 770	Pro	Ala	Ser	Pro	Pro 775	Arg	Val	Pro	Pro	Arg 780	Glu	Pro	Leu	Ser
Pro 785	Gln	Gly	Ser	Arg	Thr 790	Pro	Ser	Pro	Leu	Val 795	Pro	Pro	Gly	Ser	Ser 800
Pro	Leu	Pro	Pro	Arg 805	Leu	Ser	Ser	Ser	Pro 810	Gly	Lys	Thr	Met	Pro 815	Thr
Thr	Gln	Ser	Phe 820	Ala	Ser	Asp	Pro	Lys 825	Tyr	Ala	Thr	Pro	Gln 830	Val	Ile
Gln	Ala	Pro 835	Gly	Ala	Gly	Gly	Pro 840	Cys	Ile	Leu	Pro	Ile 845	Val	Arg	Asp
Gly	Lys 850	Lys	Val	Ser	Ser	Thr 855	His	Tyr	Tyr	Leu	Leu 860	Pro	Glu	Arg	Pro
Ser 865	Tyr	Leu	Glu	Arg	Tyr 870	Gln	Arg	Phe	Leu	Arg 875	Glu	Ala	Gln	Ser	Pro 880
Glu	Glu	Pro	Thr	Pro 885	Leu	Pro	Val	Pro	Leu 890	Leu	Leu	Pro	Pro	Pro 895	Ser
Thr	Pro	Ala	Pro 900	Ala	Ala	Pro	Thr	Ala 905	Thr	Val	Arg	Pro	Met 910	Pro	Gln
Ala	Ala	Leu 915	Asp	Pro	Lys	Ala	Asn 920	Phe	Ser	Thr	Asn	Asn 925	Ser	Asn	Pro
Gly	Ala 930	Arg	Pro	Pro	Pro	Pro 935	Arg	Ala	Thr	Ala	Arg 940	Leu	Pro	Gln	Arg
Gly 945	Cys	Pro	Gly	Asp	Gly 950	Pro	Glu	Ala	Gly	Arg 955	Pro	Ala	Asp	Lys	Ile 960
Gln	Met	Ala	Met	Val 965	His	Gly	Val	Thr	Thr 970	Glu	Glu	Cys	Gln	Ala 975	Ala

- Leu Gln Cys His Gly Trp Ser Val Gln Arg Ala Ala Gln Tyr Leu Lys 980 985 990
- Val Glu Gln Leu Phe Gly Leu Gly Leu Arg Pro Arg Gly Glu Cys His 995 1000 1005
- Lys Val Leu Glu Met Phe Asp Trp Asn Leu Glu Gln Ala Gly Cys 1010 1015 1020
- His Leu Leu Gly Ser Trp Gly Pro Ala His His Lys Arg 1025 1030 1035
- <210> 257
- <211> 424
- <212> PRT
- <213> Homo sapiens
- <400> 257
- Met Val Ser Ser Gln Lys Leu Glu Lys Pro Ile Glu Met Gly Ser Ser 1 5 10 15
- Glu Pro Leu Pro Ile Ala Asp Gly Asp Arg Arg Arg Lys Lys Arg
 20 25 30
- Arg Gly Arg Ala Thr Asp Ser Leu Pro Gly Lys Phe Glu Asp Met Tyr 35 40 45
- Lys Leu Thr Ser Glu Leu Leu Gly Glu Gly Ala Tyr Ala Lys Val Gln 50 55 60
- Gly Ala Val Ser Leu Gln Asn Gly Lys Glu Tyr Ala Val Lys Ile Ile 65 70 75 80
- Glu Lys Gln Ala Gly His Ser Arg Ser Arg Val Phe Arg Glu Val Glu 85 90 95
- Thr Leu Tyr Gln Cys Gln Gly Asn Lys Asn Ile Leu Glu Leu Ile Glu 100 105 110
- Phe Phe Glu Asp Asp Thr Arg Phe Tyr Leu Val Phe Glu Lys Leu Gln 115 120 125
- Gly Gly Ser Ile Leu Ala His Ile Gln Lys Gln Lys His Phe Asn Glu 130 135 140
- Arg Glu Ala Ser Arg Val Val Arg Asp Val Ala Ala Ala Leu Asp Phe 145 150 155 160
- Leu His Thr Lys Gly Ile Ala His Arg Asp Leu Lys Pro Glu Asn Ile 165 170 175
- Leu Cys Glu Ser Pro Glu Lys Val Ser Pro Val Lys Ile Cys Asp Phe 180 185 190
- Asp Leu Gly Ser Gly Met Lys Leu Asn Asn Ser Cys Thr Pro Ile Thr 195 200 205

Thr Pro Glu Leu Thr Thr Pro Cys Gly Ser Ala Glu Tyr Met Ala Pro Glu Val Val Glu Val Phe Thr Asp Gln Ala Thr Phe Tyr Asp Lys Arg Cys Asp Leu Trp Ser Leu Gly Val Val Leu Tyr Ile Met Leu Ser Gly Tyr Pro Pro Phe Val Gly His Cys Gly Ala Asp Cys Gly Trp Asp Arg Gly Glu Val Cys Arg Val Cys Gln Asn Lys Leu Phe Glu Ser Ile Gln 280 Glu Gly Lys Tyr Glu Phe Pro Asp Lys Asp Trp Ala His Ile Ser Ser Glu Ala Lys Asp Leu Ile Ser Lys Leu Leu Val Arg Asp Ala Lys Gln 310 315 Arg Leu Ser Ala Ala Gln Val Leu Gln His Pro Trp Val Gln Gly Gln 325 Ala Pro Glu Lys Gly Leu Pro Thr Pro Gln Val Leu Gln Arg Asn Ser 345 Ser Thr Met Asp Leu Thr Leu Phe Ala Ala Glu Ala Ile Ala Leu Asn 360 Arg Gln Leu Ser Gln His Glu Glu Asn Glu Leu Ala Glu Glu Pro Glu Ala Leu Ala Asp Gly Leu Cys Ser Met Lys Leu Ser Pro Pro Cys Lys 390 395 Ser Arg Leu Ala Arg Arg Arg Ala Leu Ala Gln Ala Gly Arg Gly Glu 405 Asp Arg Ser Pro Pro Thr Ala Leu 420

<210> 258

<211> 424

<212> PRT

<213> Homo sapiens

<400> 258

Met Val Ser Ser Gln Lys Leu Glu Lys Pro Ile Glu Met Gly Ser Ser 1 5 10 15

Glu Pro Leu Pro Ile Ala Asp Gly Asp Arg Arg Arg Lys Lys Arg
20 25 30

Arg Gly Arg Ala Thr Asp Ser Leu Pro Gly Lys Phe Glu Asp Met Tyr

Lys	Leu 50	Thr	Ser	Glu	Leu	Leu 55	Gly	Glu	Gly	Ala	Tyr 60	Ala	Lys	Val	Gln
Gly 65	Ala	Val	Ser	Leu	Gln 70	Asn	Gly	Lys	Glu	Tyr 75	Ala	Val	Lys	Ile	Ile 80
Glu	Lys	Gln	Ala	Gly 85	His	Ser	Arg	Ser	Arg 90	Val	Phe	Arg	Glu	Val 95	Glu
Thr	Leu	Tyr	Gln 100	Cys	Gln	Gly	Asn	Lys 105	Asn	Ile	Leu	Glu	Leu 110	Ile	Glu
Phe	Phe	Glu 115	Asp	Asp	Thr	Arg	Phe 120	Tyr	Leu	Val	Phe	Glu 125	Lys	Leu	Gln
Gly	Gly 130	Ser	Ile	Leu	Ala	His 135	Ile	Gln	Lys	Gln	Lys 140	His	Phe	Asn	Glu
Arg 145	Glu	Ala	Ser	Arg	Val 150	Val	Arg	Asp	Val	Ala 155	Ala	Ala	Leu	Asp	Phe 160
Leu	His	Thr	Lys	Gly 165	Ile	Ala	His	Arg	Asp 170	Leu	Lys	Pro	Glu	Asn 175	Ile
Leu	Cys	Glu	Ser 180	Pro	Glu	Lys	Val	Ser 185	Pro	Val	Lys	Ile	Cys 190	Asp	Phe
Asp	Leu	Gly 195	Ser	Gly	Met	Lys	Leu 200	Asn	Asn	Ser	Cys	Thr 205	Pro	Ile	Thr
Thr	Pro 210	Glu	Leu	Thr	Thr	Pro 215	Cys	Gly	Ser	Ala	Glu 220	Tyr	Met	Ala	Pro
Glu 225	Val	Val	Glu	Val	Phe 230	Thr	Asp	Gln	Ala	Thr 235	Phe	Tyr	Asp	Lys	Arg 240
Cys	Asp	Leu	Trp	Ser 245	Leu	Gly	Val	Val	Leu 250	Tyr	Ile	Met	Leu	Ser 255	Gly
Tyr	Pro	Pro	Phe 260	Val	Gly	His	Cys	Gly 265	Ala	Asp	Cys	Gly	Trp 270	Asp	Arg
Gly	Glu	Val 275	Cys	Arg	Val	Cys	Gln 280	Asn	Lys	Leu	Phe	Glu 285	Ser	Ile	Gln
Glu	Gly 290	Lys	Tyr	Glu	Phe	Pro 295	Asp	Lys	Asp	Trp	Ala 300	His	Ile	Ser	Ser
Glu 305	Ala	Lys	Asp	Leu	Ile 310	Ser	Lys	Leu	Leu	Val 315	Arg	Asp	Ala	Lys	Gln 320
Arg	Leu	Ser	Ala	Ala 325	Gln	Val	Leu	Gln	His 330	Pro	Trp	Val	Gln	Gly 335	Gln
Ala	Pro	Glu	Lys	Gly	Leu	Pro	Thr	Pro	Gln	Val	Leu	Gln	Arg	Asn	Ser

340	345	350

Ser Thr Met Asp Leu Thr Leu Phe Ala Ala Glu Ala Ile Ala Leu Asn 355 360 365

Arg Gln Leu Ser Gln His Glu Glu Asn Glu Leu Ala Glu Glu Pro Glu 370 375 380

Ala Leu Ala Asp Gly Leu Cys Ser Met Lys Leu Ser Pro Pro Cys Lys 385 390 395 400

Ser Arg Leu Ala Arg Arg Arg Ala Leu Ala Gln Ala Gly Arg Gly Glu 405 410 415

Asp Arg Ser Pro Pro Thr Ala Leu 420

<210> 259

<211> 424

<212> PRT

<213> Homo sapiens

<400> 259

Met Val Ser Ser Gln Lys Leu Glu Lys Pro Ile Glu Met Gly Ser Ser

1 10 15

Glu Pro Leu Pro Ile Ala Asp Gly Asp Arg Arg Lys Lys Arg
20 25 30

Arg Gly Arg Ala Thr Asp Ser Leu Pro Gly Lys Phe Glu Asp Met Tyr 35 40 45

Lys Leu Thr Ser Glu Leu Leu Gly Glu Gly Ala Tyr Ala Lys Val Gln 50 55 60

Gly Ala Val Ser Leu Gln Asn Gly Lys Glu Tyr Ala Val Lys Ile Ile 65 70 75 80

Glu Lys Gln Ala Gly His Ser Arg Ser Arg Val Phe Arg Glu Val Glu 85 90 95

Thr Leu Tyr Gln Cys Gln Gly Asn Lys Asn Ile Leu Glu Leu Ile Glu 100 105 110

Phe Phe Glu Asp Asp Thr Arg Phe Tyr Leu Val Phe Glu Lys Leu Gln 115 120 125

Gly Gly Ser Ile Leu Ala His Ile Gln Lys Gln Lys His Phe Asn Glu 130 135 140

Arg Glu Ala Ser Arg Val Val Arg Asp Val Ala Ala Ala Leu Asp Phe 145 150 155 160

Leu His Thr Lys Gly Ile Ala His Arg Asp Leu Lys Pro Glu Asn Ile 165 170 175 Leu Cys Glu Ser Pro Glu Lys Val Ser Pro Val Lys Ile Cys Asp Phe 180 190 Asp Leu Gly Ser Gly Met Lys Leu Asn Asn Ser Cys Thr Pro Ile Thr 200 Thr Pro Glu Leu Thr Thr Pro Cys Gly Ser Ala Glu Tyr Met Ala Pro 215 Glu Val Val Glu Val Phe Thr Asp Gln Ala Thr Phe Tyr Asp Lys Arg 225 230 Cys Asp Leu Trp Ser Leu Gly Val Val Leu Tyr Ile Met Leu Ser Gly Tyr Pro Pro Phe Val Gly His Cys Gly Ala Asp Cys Gly Trp Asp Arg Gly Glu Val Cys Arg Val Cys Gln Asn Lys Leu Phe Glu Ser Ile Gln 280 285 275 Glu Gly Lys Tyr Glu Phe Pro Asp Lys Asp Trp Ala His Ile Ser Ser 295 Glu Ala Lys Asp Leu Ile Ser Lys Leu Leu Val Arg Asp Ala Lys Gln 305 Arg Leu Ser Ala Ala Gln Val Leu Gln His Pro Trp Val Gln Gly Gln Ala Pro Glu Lys Gly Leu Pro Thr Pro Gln Val Leu Gln Arg Asn Ser 345 Ser Thr Met Asp Leu Thr Leu Phe Ala Ala Glu Ala Ile Ala Leu Asn 355 360 Arg Gln Leu Ser Gln His Glu Glu Asn Glu Leu Ala Glu Glu Pro Glu 375 Ala Leu Ala Asp Gly Leu Cys Ser Met Lys Leu Ser Pro Pro Cys Lys 385 390 395 400 Ser Arg Leu Ala Arg Arg Arg Ala Leu Ala Gln Ala Gly Arg Gly Glu 410 Asp Arg Ser Pro Pro Thr Ala Leu 420 <210> 260 <211> 898 <212> PRT <213> Homo sapiens <400> 260 Met Arg Lys Gly Val Leu Lys Asp Pro Glu Ile Ala Asp Leu Phe Tyr

10

15

- Lys Asp Asp Pro Glu Glu Leu Phe Ile Gly Leu His Glu Ile Gly His
 20 25 30

 Gly Ser Phe Gly Ala Val Tyr Phe Ala Thr Asn Ala His Thr Ser Glu
- 35 40 45
- Val Val Ala Ile Lys Lys Met Ser Tyr Ser Gly Lys Gln Thr His Glu 50 55 60
- Lys Trp Gln Asp Ile Leu Lys Glu Val Lys Phe Leu Arg Gln Leu Lys 65 70 75 80
- His Pro Asn Thr Ile Glu Tyr Lys Gly Cys Tyr Leu Lys Glu His Thr 85 90 95
- Ala Trp Leu Val Met Glu Tyr Cys Leu Gly Ser Ala Ser Asp Leu Leu 100 105 110
- Glu Val His Lys Lys Pro Leu Gln Glu Val Glu Ile Ala Ala Ile Thr 115 120 125
- His Gly Ala Leu His Gly Leu Ala Tyr Leu His Ser His Ala Leu Ile 130 135 140
- His Arg Asp Ile Lys Ala Gly Asn Ile Leu Leu Thr Glu Pro Gly Gln 145 150 155 160
- Val Lys Leu Ala Asp Phe Gly Ser Ala Ser Met Ala Ser Pro Ala Asn 165 170 175
- Ser Phe Val Gly Thr Pro Tyr Trp Met Ala Pro Glu Val Ile Leu Ala 180 185 190
- Met Asp Glu Gly Gln Tyr Asp Gly Lys Val Asp Ile Trp Ser Leu Gly
 195 200 205
- Ile Thr Cys Ile Glu Leu Ala Glu Arg Lys Pro Pro Leu Phe Asn Met 210 215 220
- Asn Ala Met Ser Ala Leu Tyr His Ile Ala Gln Asn Asp Ser Pro Thr 225 230 235 240
- Leu Gln Ser Asn Glu Trp Thr Asp Ser Phe Arg Arg Phe Val Asp Tyr 245 250 255
- Cys Leu Gln Lys Ile Pro Gln Glu Arg Pro Thr Ser Ala Glu Leu Leu 260 265 270
- Arg His Asp Phe Val Arg Arg Asp Arg Pro Leu Arg Val Leu Ile Asp 275 280 285
- Leu Ile Gln Arg Thr Lys Asp Ala Val Arg Glu Leu Asp Asn Leu Gln 290 295 300
- Tyr Arg Lys Met Lys Lys Ile Leu Phe Gln Glu Thr Arg Asn Gly Pro 305 310 315 320

Leu	Asn	Glu	Ser	Gln 325	Glu	Asp	Glu	Glu	Asp 330	Ser	Glu	His	Gly	Thr 335	Ser
Leu	Asn	Arg	Glu 340	Met	Asp	Ser	Leu	Gly 345	Ser	Asn	His	Ser	Ile 350	Pro	Ser
Met	Ser	Val 355	Thr	Trp	Asn	Gln	Pro 360	Glu	Gln	Gly	Asn	Gly 365	Gln	Pro	Gly
Gln	Gln 370	Pro	Phe	His	Ser	Lys 375	His	Val	Arg	Val	Met 380	Met	His	Asp	Asp
Glu 385	Ser	Thr	Ile	Asn	Ser 390	Ser	Ser	Ser	Val	Val 395	His	Lys	Lys	Asp	His 400
Val	Phe	Ile	Arg	Asp 405	Glu	Ala	Gly	His	Gly 410	Asp	Pro	Arg	Pro	Glu 415	Pro
Arg	Pro	Thr	Gln 420	Ser	Val	Gln	Ser	Gln 425	Ala	Leu	His	Tyr	Arg 430	Asn	Arg
Glu	Arg	Phe 435	Ala	Thr	Ile	Lys	Ser 440	Ala	Ser	Leu	Val	Thr 445	Arg	Gln	Ile
His	Glu 450	His	Glu	Gln	Glu	Asn 455	Glu	Leu	Arg	Glu	Gln 460	Met	Ser	Gly	Tyr
Lys 465	Arg	Met	Arg	Arg	Gln 470	His	Gln	Lys	Gln	Leu 475	Ile	Ala	Leu	Glu	Asn 480
Lys	Leu	Lys	Ala	Glu 485	Met	Asp	Glu	His	Arg 490	Leu	Lys	Leu	Gln	Lys 495	Glu
Val	Glu	Thr	His 500	Ala	Asn	Asn	Ser	Ser 505	Ile	Glu	Leu	Glu	Lys 510	Leu	Ala
Lys	Lys	Gln 515	Val	Ala	Ile	Ile	Glu 520	Lys	Glu	Ala	Lys	Val 525	Ala	Ala	Ala
Asp	Glu 530	Lys	Lys	Phe	Gln	Gln 535	Gln	Ile	Leu	Ala	Gln 540	Gln	Lys	Lys	Asp
Leu 545	Thr	Thr	Phe	Leu	Glu 550	Ser	Gln	Lys	Lys	Gln 555	Tyr	Lys	Ile	Cys	Lys 560
Glu	Lys	Ile	Lys	Glu 565	Glu	Met	Asn	Glu	Asp 570	His	Ser	Thr	Pro	Lys 575	Lys
Glu	Lys	Gln	Glu 580	Arg	Ile	Ser	Lys	His 585	Lys	Glu	Asn	Leu	Gln 590	His	Thr
Gln	Ala	Glu 595	Glu	Glu	Ala	His	Leu 600	Leu	Thr	Gln	Gln	Arg 605	Leu	Tyr	Tyr
Asp	Lys 610	Asn	Cys	Arg	Phe	Phe 615	Lys	Arg	Lys	Ile	Met 620	Ile	Lys	Arg	His

Glu Val Glu Gln Gln Asn Ile Arq Glu Glu Leu Asn Lys Lys Arg Thr Gln Lys Glu Met Glu His Ala Met Leu Ile Arg His Asp Glu Ser Thr 650 Arg Glu Leu Glu Tyr Arg Gln Leu His Thr Leu Gln Lys Leu Arg Met Asp Leu Ile Arg Leu Gln His Gln Thr Glu Leu Glu Asn Gln Leu Glu Tyr Asn Lys Arg Arg Glu Arg Glu Leu His Arg Lys His Val Met Glu 700 Leu Arg Gln Gln Pro Lys Asn Leu Lys Ala Met Glu Met Gln Ile Lys 710 Lys Gln Phe Gln Asp Thr Cys Lys Val Gln Thr Lys Gln Tyr Lys Ala 730 Leu Lys Asn His Gln Leu Glu Val Thr Pro Lys Asn Glu His Lys Thr Ile Leu Lys Thr Leu Lys Asp Glu Gln Thr Arg Lys Leu Ala Ile Leu 760 Ala Glu Gln Tyr Glu Gln Ser Ile Asn Glu Met Met Ala Ser Gln Ala Leu Arg Leu Asp Glu Ala Gln Glu Ala Glu Cys Gln Ala Leu Arg Leu Gln Leu Gln Gln Glu Met Glu Leu Leu Asn Ala Tyr Gln Ser Lys Ile 805 810 Lys Met Gln Thr Glu Ala Gln His Glu Arg Glu Leu Gln Lys Leu Glu 820 Gln Arg Val Ser Leu Arg Arg Ala His Leu Glu Gln Lys Ile Glu Glu 840 Glu Leu Ala Ala Leu Gln Lys Glu Arg Ser Glu Arg Ile Lys Asn Leu 855 Leu Glu Arg Gln Glu Arg Glu Ile Glu Thr Phe Asp Met Glu Ser Leu 865 870

Arg Met Gly Phe Gly Asn Leu Val Thr Leu Asp Phe Pro Lys Glu Asp

890

885

Tyr Arg

<210> 261 <211> 749

<212> PRT

<213> Homo sapiens

<400> 261

Met Glu Glu Leu His Ser Leu Asp Pro Arg Arg Gln Glu Leu Leu Glu
1 5 10 15

Ala Arg Phe Thr Gly Val Gly Val Ser Lys Gly Pro Leu Asn Ser Glu 20 25 30

Ser Ser Asn Gln Ser Leu Cys Ser Val Gly Ser Leu Ser Asp Lys Glu
35 40 45

Val Glu Thr Pro Glu Lys Lys Gln Asn Asp Gln Arg Asn Arg Lys Arg
50 55 60

Lys Ala Glu Pro Tyr Glu Thr Ser Gln Gly Lys Gly Thr Pro Arg Gly 65 70 75 80

His Lys Ile Ser Asp Tyr Phe Glu Phe Ala Gly Gly Ser Ala Pro Gly 85 90 95

Thr Ser Pro Gly Arg Ser Val Pro Pro Val Ala Arg Ser Ser Pro Gln
100 105 110

His Ser Leu Ser Asn Pro Leu Pro Arg Arg Val Glu Gln Pro Leu Tyr 115 120 125

Gly Leu Asp Gly Ser Ala Ala Lys Glu Ala Thr Glu Glu Gln Ser Ala 130 135 140

Leu Pro Thr Leu Met Ser Val Met Leu Ala Lys Pro Arg Leu Asp Thr 145 150 155 160

Glu Gln Leu Ala Gln Arg Gly Ala Gly Leu Cys Phe Thr Phe Val Ser 165 170 175

Ala Gln Gln Asn Ser Pro Ser Ser Thr Gly Ser Gly Asn Thr Glu His 180 185 190

Ser Cys Ser Ser Gln Lys Gln Ile Ser Ile Gln His Arg Arg Thr Gln 195 200 205

Ser Asp Leu Thr Ile Glu Lys Ile Ser Ala Leu Glu Asn Ser Lys Asn 210 215 220

Ser Asp Leu Glu Lys Lys Glu Gly Arg Ile Asp Asp Leu Leu Arg Ala 225 230 235 240

Asn Cys Asp Leu Arg Gln Ile Asp Glu Gln Gln Lys Met Leu Glu 245 250 255

Lys Tyr Lys Glu Arg Leu Asn Arg Cys Val Thr Met Ser Lys Lys Leu 260 265 270

Leu Ile Glu Lys Ser Lys Gln Glu Lys Met Ala Cys Arg Asp Lys Ser

Met	Gln 290	Asp	Arg	Leu	Arg	Leu 295	Gly	His	Phe	Thr	Thr 300	Val	Arg	His	Gly
Ala 305	Ser	Phe	Thr	Glu	Gln 310	Trp	Thr	Asp	Gly	Tyr 315	Ala	Phe	Gln	Asn	Leu 320
Ile	Lys	Gln	Gln	Glu 325	Arg	Ile	Asn	Ser	Gln 330	Arg	Glu	Glu	Ile	Glu 335	Arg
Gln	Arg	Lys	Met 340	Leu	Ala	Lys	Arg	Lys 345	Pro	Pro	Ala	Met	Gly 350	Gln	Ala
Pro	Pro	Ala 355	Thr	Asn	Glu	Gln	Lys 360	Gln	Arg	Lys	Ser	Lys 365	Thr	Asn	Gly
Ala	Glu 370	Asn	Glu	Thr	Leu	Thr 375	Leu	Ala	Glu	Tyr	His 380	Glu	Gln	Glu	Glu
Ile 385	Phe	Lys	Leu	Arg	Leu 390	Gly	His	Leu	Lys	Lys 395	Glu	Glu	Ala	Glu	Ile 400
Gln	Ala	Glu	Leu	Glu 405	Arg	Leu	Glu	Arg	Val 410	Arg	Asn	Leu	His	Ile 415	Arg
Glu	Leu	Lys	Arg 420	Ile	His	Asn	Glu	Asp 425	Asn	Ser	Gln	Phe	Lys 430	Asp	His
Pro	Thr	Leu 435	Asn	Asp	Arg	Tyr	Leu 440	Leu	Leu	His	Leu	Leu 445	Gly	Arg	Gly
Gly	Phe 450	Ser	Glu	Val	Tyr	Lys 455	Ala	Phe	Asp	Leu	Thr 460	Glu	Gln	Arg	Tyr
Val 465	Ala	Val	Lys	Ile	His 470	Gln	Leu	Asn	Lys	Asn 475	Trp	Arg	Asp	Glu	Lys 480
Lys	Glu	Asn	Tyr	His 485	Lys	His	Ala	Cys	Arg 490	Glu	Tyr	Arg	Ile	His 495	Lys
Glu	Leu	Asp	His 500	Pro	Arg	Ile	Val	Lys 505	Leu	Tyr	Asp	Tyr	Phe 510	Ser	Leu
Asp	Thr	Asp 515	Ser	Phe	Cys	Thr	Val 520	Leu	Glu	Tyr	Cys	Glu 525	Gly	Asn	Asp
Leu	Asp 530	Phe	Tyr	Leu	Lys	Gln 535	His	Lys	Leu	Met	Ser 540	Glu	Lys	Glu	Ala
Arg 545	Ser	Ile	Ile	Met	Gln 550	Ile	Val	Asn	Ala	Leu 555	Lys	Tyr	Leu	Asn	Glu 560
Ile	Lys	Pro	Pro	Ile 565	Ile	His	Tyr	Asp	Leu 570	Lys	Pro	Gly	Asn	Ile 575	Leu
Leu	Val	Asn	Gly	Thr	Ala	Cys	Gly	Glu	Ile	Lys	Ile	Thr	Asp	Phe	Gly

580 585 590

Leu Ser Lys Ile Met Asp Asp Ser Tyr Asn Ser Val Asp Gly Met 595 600 605

Glu Leu Thr Ser Gln Gly Ala Gly Thr Tyr Trp Tyr Leu Pro Pro Glu 610 615 620

Cys Phe Val Val Gly Lys Glu Pro Pro Lys Ile Ser Asn Lys Val Asp 625 630 635 640

Val Trp Ser Val Gly Val Ile Phe Tyr Gln Cys Leu Tyr Gly Arg Lys 645 650 655

Pro Phe Gly His Asn Gln Ser Gln Gln Asp Ile Leu Gln Glu Asn Thr 660 665 670

Ile Leu Lys Ala Thr Glu Val Gln Phe Pro Pro Lys Pro Val Val Thr 675 680 685

Pro Glu Ala Lys Ala Phe Ile Arg Arg Cys Leu Ala Tyr Arg Lys Arg 690 695 700

Asp Arg Ile Asp Val Gln Gln Leu Ala Cys Asp Pro Tyr Leu Leu Pro 705 710 715 720

His Ile Arg Lys Ser Val Ser Thr Ser Ser Pro Ala Gly Ala Ala Ile 725 730 735

Ala Ser Thr Ser Gly Ala Ser Asn Asn Ser Ser Ser Asn 740 745

<210> 262

<211> 712

<212> PRT

<213> Homo sapiens

<400> 262

Met Ala Gly Gly Pro Gly Pro Gly Glu Pro Ala Ala Pro Gly Ala Gln
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His Phe Leu Tyr Glu Val Pro Pro Trp Val Met Cys Arg Phe Tyr Lys 20 25 30

Val Met Asp Ala Leu Glu Pro Ala Asp Trp Cys Gln Phe Ala Ala Leu 35 40 45

Ile Val Arg Asp Gln Thr Glu Leu Arg Leu Cys Glu Arg Ser Gly Gln 50 55 60

Arg Thr Ala Ser Val Leu Trp Pro Trp Ile Asn Arg Asn Ala Arg Val 65 70 75 80

Ala Asp Leu Val His Ile Leu Thr His Leu Gln Leu Leu Arg Ala Arg 85 90 95 Asp Ile Ile Thr Ala Trp His Pro Pro Ala Pro Leu Pro Ser Pro Gly 100 105 110 Thr Thr Ala Pro Arg Pro Ser Ser Ile Pro Ala Pro Ala Glu Ala Glu 120 Ala Trp Ser Pro Arg Lys Leu Pro Ser Ser Ala Ser Thr Phe Leu Ser 135 Pro Ala Phe Pro Gly Ser Gln Thr His Ser Gly Pro Glu Leu Gly Leu 150 155 Val Pro Ser Pro Ala Ser Leu Trp Pro Pro Pro Pro Ser Pro Ala Pro 170 Ser Ser Thr Lys Pro Gly Pro Glu Ser Ser Val Ser Leu Leu Gln Gly 180 185 Ala Arg Pro Ser Pro Phe Cys Trp Pro Leu Cys Glu Ile Ser Arg Gly 200 195 Thr His Asn Phe Ser Glu Glu Leu Lys Ile Gly Glu Gly Phe Gly Cys Val Tyr Arg Ala Val Met Arg Asn Thr Val Tyr Ala Val Lys Arg 225 Leu Lys Glu Asn Ala Asp Leu Glu Trp Thr Ala Val Lys Gln Ser Phe 250 Leu Thr Glu Val Glu Gln Leu Ser Arg Phe Arg His Pro Asn Ile Val 265 Asp Phe Ala Gly Tyr Cys Ala Gln Asn Gly Phe Tyr Cys Leu Val Tyr 275 280 Gly Phe Leu Pro Asn Gly Ser Leu Glu Asp Arg Leu His Cys Gln Thr 295 Gln Ala Cys Pro Pro Leu Ser Trp Pro Gln Arg Leu Asp Ile Leu Leu 305 315 320 Gly Thr Ala Arg Ala Ile Gln Phe Leu His Gln Asp Ser Pro Ser Leu 330 Ile His Gly Asp Ile Lys Ser Ser Asn Val Leu Leu Asp Glu Arg Leu 345 Thr Pro Lys Leu Gly Asp Phe Gly Leu Ala Arg Phe Ser Arg Phe Ala 355 Gly Ser Ser Pro Ser Gln Ser Ser Met Val Ala Arg Thr Gln Thr Val 375 Arg Gly Thr Leu Ala Tyr Leu Pro Glu Glu Tyr Ile Lys Thr Gly Arg 390 395 400

Leu Ala Val Asp Thr Asp Thr Phe Ser Phe Gly Val Val Leu Glu 405 410 Thr Leu Ala Gly Gln Arg Ala Val Lys Thr His Gly Ala Arg Thr Lys 425 Tyr Leu Lys Asp Leu Val Glu Glu Glu Ala Glu Glu Ala Gly Val Ala 440 Leu Arg Ser Thr Gln Ser Thr Leu Gln Ala Gly Leu Ala Ala Asp Ala 450 455 Trp Ala Ala Pro Ile Ala Met Gln Ile Tyr Lys Lys His Leu Asp Pro 475 Arg Pro Gly Pro Cys Pro Pro Glu Leu Gly Leu Gly Leu Gly Gln Leu 490 Ala Cys Cys Cys Leu His Arg Arg Ala Lys Arg Arg Pro Pro Met Thr 505 Gln Val Tyr Glu Arg Leu Glu Lys Leu Gln Ala Val Val Ala Gly Val 520 Pro Gly His Leu Glu Ala Ala Ser Cys Ile Pro Pro Ser Pro Gln Glu Asn Ser Tyr Val Ser Ser Thr Gly Arg Ala His Ser Gly Ala Ala Pro Trp Gln Pro Leu Ala Ala Pro Ser Gly Ala Ser Ala Gln Ala Ala Glu 570 Gln Leu Gln Arg Gly Pro Asn Gln Pro Val Glu Ser Asp Glu Ser Leu 580 585 590 Gly Gly Leu Ser Ala Ala Leu Arg Ser Trp His Leu Thr Pro Ser Cys 600 Pro Leu Asp Pro Ala Pro Leu Arg Glu Ala Gly Cys Pro Gln Gly Asp 610 Thr Ala Gly Glu Ser Ser Trp Gly Ser Gly Pro Gly Ser Arg Pro Thr Ala Val Glu Gly Leu Ala Leu Gly Ser Ser Ala Ser Ser Ser Glu 650 Pro Pro Gln Ile Ile Ile Asn Pro Ala Arg Gln Lys Met Val Gln Lys 660 Leu Ala Leu Tyr Glu Asp Gly Ala Leu Asp Ser Leu Gln Leu Leu Ser Ser Ser Ser Leu Pro Gly Leu Gly Leu Glu Gln Asp Arg Gln Gly Pro 695 700

Glu Glu Ser Asp Glu Phe Gln Ser 705 710 <210> 263 <211> 712 <212> PRT <213> Homo sapiens <400> 263 Met Ala Gly Gly Pro Gly Pro Gly Glu Pro Ala Ala Pro Gly Ala Gln His Phe Leu Tyr Glu Val Pro Pro Trp Val Met Cys Arg Phe Tyr Lys 25 20 Val Met Asp Ala Leu Glu Pro Ala Asp Trp Cys Gln Phe Ala Ala Leu 40 Ile Val Arg Asp Gln Thr Glu Leu Arg Leu Cys Glu Arg Ser Gly Gln Arg Thr Ala Ser Val Leu Trp Pro Trp Ile Asn Arg Asn Ala Arg Val Ala Asp Leu Val His Ile Leu Thr His Leu Gln Leu Leu Arg Ala Arg 90 Asp Ile Ile Thr Ala Trp His Pro Pro Ala Pro Leu Pro Ser Pro Gly 100 Thr Thr Ala Pro Arg Pro Ser Ser Ile Pro Ala Pro Ala Glu Ala Glu Ala Trp Ser Pro Arg Lys Leu Pro Ser Ser Ala Ser Thr Phe Leu Ser 135 Pro Ala Phe Pro Gly Ser Gln Thr His Ser Gly Pro Glu Leu Gly Leu 145 150 155 Val Pro Ser Pro Ala Ser Leu Trp Pro Pro Pro Pro Ser Pro Ala Pro 170 Ser Ser Thr Lys Pro Gly Pro Glu Ser Ser Val Ser Leu Leu Gln Gly 180 185 Ala Arg Pro Ser Pro Phe Cys Trp Pro Leu Cys Glu Ile Ser Arg Gly 195 200 Thr His Asn Phe Ser Glu Glu Leu Lys Ile Gly Glu Gly Phe Gly 215 Cys Val Tyr Arg Ala Val Met Arg Asn Thr Val Tyr Ala Val Lys Arg 225 230 235 Leu Lys Glu Asn Ala Asp Leu Glu Trp Thr Ala Val Lys Gln Ser Phe 245 250

Leu Thr Glu Val Glu Gln Leu Ser Arg Phe Arg His Pro Asn Ile Val Asp Phe Ala Gly Tyr Cys Ala Gln Asn Gly Phe Tyr Cys Leu Val Tyr 280 Gly Phe Leu Pro Asn Gly Ser Leu Glu Asp Arg Leu His Cys Gln Thr 295 Gln Ala Cys Pro Pro Leu Ser Trp Pro Gln Arg Leu Asp Ile Leu Leu 315 Gly Thr Ala Arg Ala Ile Gln Phe Leu His Gln Asp Ser Pro Ser Leu 330 335 Ile His Gly Asp Ile Lys Ser Ser Asn Val Leu Leu Asp Glu Arg Leu Thr Pro Lys Leu Gly Asp Phe Gly Leu Ala Arg Phe Ser Arg Phe Ala 360 Gly Ser Ser Pro Ser Gln Ser Ser Met Val Ala Arg Thr Gln Thr Val 370 375 Arg Gly Thr Leu Ala Tyr Leu Pro Glu Glu Tyr Ile Lys Thr Gly Arg 395 Leu Ala Val Asp Thr Asp Thr Phe Ser Phe Gly Val Val Leu Glu Thr Leu Ala Gly Gln Arg Ala Val Lys Thr His Gly Ala Arg Thr Lys Tyr Leu Lys Asp Leu Val Glu Glu Glu Ala Glu Glu Ala Gly Val Ala 440 Leu Arg Ser Thr Gln Ser Thr Leu Gln Ala Gly Leu Ala Ala Asp Ala 450 455 Trp Ala Ala Pro Ile Ala Met Gln Ile Tyr Lys Lys His Leu Asp Pro 470 475 Arg Pro Gly Pro Cys Pro Pro Glu Leu Gly Leu Gly Leu Gly Gln Leu 490 Ala Cys Cys Leu His Arg Arg Ala Lys Arg Pro Pro Met Thr 500 505 Gln Val Tyr Glu Arg Leu Glu Lys Leu Gln Ala Val Val Ala Gly Val 520 Pro Gly His Leu Glu Ala Ala Ser Cys Ile Pro Pro Ser Pro Gln Glu 530 Asn Ser Tyr Val Ser Ser Thr Gly Arg Ala His Ser Gly Ala Ala Pro

545

550

555

560

Trp Gln Pro Leu Ala Ala Pro Ser Gly Ala Ser Ala Gln Ala Ala Glu Gln Leu Gln Arg Gly Pro Asn Gln Pro Val Glu Ser Asp Glu Ser Leu 585 Gly Gly Leu Ser Ala Ala Leu Arg Ser Trp His Leu Thr Pro Ser Cys 600 Pro Leu Asp Pro Ala Pro Leu Arg Glu Ala Gly Cys Pro Gln Gly Asp 615 Thr Ala Gly Glu Ser Ser Trp Gly Ser Gly Pro Gly Ser Arg Pro Thr 625 630 Ala Val Glu Gly Leu Ala Leu Gly Ser Ser Ala Ser Ser Ser Glu 650 Pro Pro Gln Ile Ile Ile Asn Pro Ala Arg Gln Lys Met Val Gln Lys 665 Leu Ala Leu Tyr Glu Asp Gly Ala Leu Asp Ser Leu Gln Leu Leu Ser 675 Ser Ser Leu Pro Gly Leu Gly Leu Glu Gln Asp Arg Gln Gly Pro 700 Glu Glu Ser Asp Glu Phe Gln Ser 705 <210> 264 <211> 712 <212> PRT <213> Homo sapiens <400> 264 Met Ala Gly Gly Pro Gly Pro Gly Glu Pro Ala Ala Pro Gly Ala Gln His Phe Leu Tyr Glu Val Pro Pro Trp Val Met Cys Arg Phe Tyr Lys 20 25 Val Met Asp Ala Leu Glu Pro Ala Asp Trp Cys Gln Phe Ala Ala Leu 35 Ile Val Arg Asp Gln Thr Glu Leu Arg Leu Cys Glu Arg Ser Gly Gln 55 Arg Thr Ala Ser Val Leu Trp Pro Trp Ile Asn Arg Asn Ala Arg Val 65 Ala Asp Leu Val His Ile Leu Thr His Leu Gln Leu Leu Arg Ala Arg

90

Asp Ile Ile Thr Ala Trp His Pro Pro Ala Pro Leu Pro Ser Pro Gly

Thr	Thr	Ala 115	Pro	Arg	Pro	Ser	Ser 120	Ile	Pro	Ala	Pro	Ala 125	Glu	Ala	Glu
Ala	Trp 130	Ser	Pro	Arg	Lys	Leu 135	Pro	Ser	Ser	Ala	Ser 140	Thr	Phe	Leu	Ser
Pro 145	Ala	Phe	Pro	Gly	Ser 150	Gln	Thr	His	Ser	Gly 155	Pro	Glu	Leu	Gly	Leu 160
Val	Pro	Ser	Pro	Ala 165	Ser	Leu	Trp	Pro	Pro 170	Pro	Pro	Ser	Pro	Ala 175	Pro
Ser	Ser	Thr	Lys 180	Pro	Gly	Pro	Glu	Ser 185	Ser	Val	Ser	Leu	Leu 190	Gln	Gly
Ala	Arg	Pro 195	Ser	Pro	Phe	Cys	Trp 200	Pro	Leu	Cys	Glu	Ile 205	Ser	Arg	Gly
Thr	His 210	Asn	Phe	Ser	Glu	Glu 215	Leu	Lys	Ile	Gly	Glu 220	Gly	Gly	Phe	Gly
Cys 225	Val	Tyr	Arg	Ala	Val 230	Met	Arg	Asn	Thr	Val 235	Tyr	Ala	Val	Lys	Arg 240
Leu	Lys	Glu	Asn	Ala 245	Asp	Leu	Glu	Trp	Thr 250	Ala	Val	Lys	Gln	Ser 255	Phe
Leu	Thr	Glu	Val 260	Glu	Gln	Leu	Ser	Arg 265	Phe	Arg	His	Pro	Asn 270	Ile	Val
Asp	Phe	Ala 275	Gly	Tyr	Cys	Ala	Gln 280	Asn	Gly	Phe	Tyr	Cys 285	Leu	Val	Tyr
Gly	Phe 290	Leu	Pro	Asn	Gly	Ser 295	Leu	Glu	Asp	Arg	Leu 300	His	Cys	Gln	Thr
Gln 305	Ala	Cys	Pro	Pro	Leu 310	Ser	Trp	Pro	Gln	Arg 315	Leu	Asp	Ile	Leu	Leu 320
Gly	Thr	Ala	Arg	Ala 325	Ile	Gln	Phe	Leu	His 330	Gln	Asp	Ser	Pro	Ser 335	Leu
Ile	His	Gly	Asp 340	Ile	Lys	Ser	Ser	Asn 345	Val	Leu	Leu	Asp	Glu 350	Arg	Leu
Thr	Pro	Lys 355	Leu	Gly	Asp	Phe	Gly 360	Leu	Ala	Arg	Phe	Ser 365	Arg	Phe	Ala
Gly	Ser 370	Ser	Pro	Ser	Gln	Ser 375	Ser	Met	Val	Ala	Arg 380	Thr	Gln	Thr	Val
Arg 385	Gly	Thr	Leu	Ala	Tyr 390	Leu	Pro	Glu	Glu	Tyr 395	Ile	Lys	Thr	Gly	Arg 400
Leu	Ala	Val	Asp	Thr	Asp	Thr	Phe	Ser	Phe	Gly	Val	Val	Val	Leu	Glu

Thr Leu Ala Gly Gln Arg Ala Val Lys Thr His Gly Ala Arg Thr Lys Tyr Leu Lys Asp Leu Val Glu Glu Glu Ala Glu Ala Gly Val Ala 440 Leu Arg Ser Thr Gln Ser Thr Leu Gln Ala Gly Leu Ala Ala Asp Ala 455 Trp Ala Ala Pro Ile Ala Met Gln Ile Tyr Lys Lys His Leu Asp Pro Arg Pro Gly Pro Cys Pro Pro Glu Leu Gly Leu Gly Leu Gly Gln Leu 490 Ala Cys Cys Cys Leu His Arg Arg Ala Lys Arg Arg Pro Pro Met Thr Gln Val Tyr Glu Arg Leu Glu Lys Leu Gln Ala Val Val Ala Gly Val 515 520 Pro Gly His Leu Glu Ala Ala Ser Cys Ile Pro Pro Ser Pro Gln Glu 535 540 Asn Ser Tyr Val Ser Ser Thr Gly Arg Ala His Ser Gly Ala Ala Pro 545 550 560 555 Trp Gln Pro Leu Ala Ala Pro Ser Gly Ala Ser Ala Gln Ala Ala Glu 570 Gln Leu Gln Arg Gly Pro Asn Gln Pro Val Glu Ser Asp Glu Ser Leu 585 Gly Gly Leu Ser Ala Ala Leu Arg Ser Trp His Leu Thr Pro Ser Cys 595 Pro Leu Asp Pro Ala Pro Leu Arg Glu Ala Gly Cys Pro Gln Gly Asp Thr Ala Gly Glu Ser Ser Trp Gly Ser Gly Pro Gly Ser Arg Pro Thr 625 630 635 640 Ala Val Glu Gly Leu Ala Leu Gly Ser Ser Ala Ser Ser Ser Glu 645 650 Pro Pro Gln Ile Ile Ile Asn Pro Ala Arg Gln Lys Met Val Gln Lys 665 Leu Ala Leu Tyr Glu Asp Gly Ala Leu Asp Ser Leu Gln Leu Leu Ser 675 Ser Ser Ser Leu Pro Gly Leu Gly Leu Glu Gln Asp Arg Gln Gly Pro

695

Glu Glu Ser Asp Glu Phe Gln Ser

700

705 710

<210> 265

<211> 740

<212> PRT

<213> Homo sapiens

<400> 265

Met Pro Leu Ala Gln Leu Ala Asp Pro Trp Gln Lys Met Ala Val Glu
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Ser Pro Ser Asp Ser Ala Glu Asn Gly Gln Gln Ile Met Asp Glu Pro 20 25 30

Met Gly Glu Glu Glu Ile Asn Pro Gln Thr Glu Glu Val Ser Ile Lys 35 40 45

Glu Ile Ala Ile Thr His His Val Lys Glu Gly His Glu Lys Ala Asp 50 55 60

Pro Ser Gln Phe Glu Leu Leu Lys Val Leu Gly Gln Gly Ser Phe Gly 65 70 75 80

Lys Val Phe Leu Val Lys Lys Ile Ser Gly Ser Asp Ala Arg Gln Leu 85 90 95

Tyr Ala Met Lys Val Leu Lys Lys Ala Thr Leu Lys Val Arg Asp Arg
100 105 110

Val Arg Thr Lys Met Glu Arg Asp Ile Leu Val Glu Val Asn His Pro 115 120 125

Phe Ile Val Lys Leu His Tyr Ala Phe Gln Thr Glu Gly Lys Leu Tyr 130 135 140

Leu Ile Leu Asp Phe Leu Arg Gly Gly Asp Leu Phe Thr Arg Leu Ser 145 150 155 160

Lys Glu Val Met Phe Thr Glu Glu Asp Val Lys Phe Tyr Leu Ala Glu 165 170 175

Leu Ala Leu Asp His Leu His Ser Leu Gly Ile Ile Tyr Arg , 180 185 190

Asp Leu Lys Pro Glu Asn Ile Leu Leu Asp Glu Glu Gly His Ile Lys 195 200 205

Leu Thr Asp Phe Gly Leu Ser Lys Glu Ser Ile Asp His Glu Lys Lys 210 215 220

Ala Tyr Ser Phe Cys Gly Thr Val Glu Tyr Met Ala Pro Glu Val Val 225 230 235 240

Asn Arg Arg Gly His Thr Gln Ser Ala Asp Trp Trp Ser Phe Gly Val 245 250 255 Leu Met Phe Glu Met Leu Thr Gly Thr Leu Pro Phe Gln Gly Lys Asp 260 265 270 Arg Lys Glu Thr Met Thr Met Ile Leu Lys Ala Lys Leu Gly Met Pro 280 Gln Phe Leu Ser Pro Glu Ala Gln Ser Leu Leu Arg Met Leu Phe Lys 295 Arg Asn Pro Ala Asn Arg Leu Gly Ala Gly Pro Asp Gly Val Glu Glu 310 Ile Lys Arg His Ser Phe Phe Ser Thr Ile Asp Trp Asn Lys Leu Tyr 330 Arg Arg Glu Ile His Pro Pro Phe Lys Pro Ala Thr Gly Arg Pro Glu 345 Asp Thr Phe Tyr Phe Asp Pro Glu Phe Thr Ala Lys Thr Pro Lys Asp Ser Pro Gly Ile Pro Pro Ser Ala Asn Ala His Gln Leu Phe Arg Gly Phe Ser Phe Val Ala Ile Thr Ser Asp Asp Glu Ser Gln Ala Met Gln Thr Val Gly Val His Ser Ile Val Gln Gln Leu His Arg Asn Ser Ile Gln Phe Thr Asp Gly Tyr Glu Val Lys Glu Asp Ile Gly Val Gly Ser 425 Tyr Ser Val Cys Lys Arg Cys Ile His Lys Ala Thr Asn Met Glu Phe 435 Ala Val Lys Ile Ile Asp Lys Ser Lys Arg Asp Pro Thr Glu Glu Ile Glu Ile Leu Leu Arg Tyr Gly Gln His Pro Asn Ile Ile Thr Leu Lys 465 475 480 Asp Val Tyr Asp Asp Gly Lys Tyr Val Tyr Val Val Thr Glu Leu Met 490 Lys Gly Gly Glu Leu Leu Asp Lys Ile Leu Arg Gln Lys Phe Phe Ser Glu Arg Glu Ala Ser Ala Val Leu Phe Thr Ile Thr Lys Thr Val Glu 515 Tyr Leu His Ala Gln Gly Val Val His Arg Asp Leu Lys Pro Ser Asn Ile Leu Tyr Val Asp Glu Ser Gly Asn Pro Glu Ser Ile Arg Ile Cys Asp Phe Gly Phe Ala Lys Gln Leu Arg Ala Glu Asn Gly Leu Leu Met 570 565 Thr Pro Cys Tyr Thr Ala Asn Phe Val Ala Pro Glu Val Leu Lys Arg 585 Gln Gly Tyr Asp Ala Ala Cys Asp Ile Trp Ser Leu Gly Val Leu Leu Tyr Thr Met Leu Thr Gly Tyr Thr Pro Phe Ala Asn Gly Pro Asp Asp 610 615 Thr Pro Glu Glu Ile Leu Ala Arg Ile Gly Ser Gly Lys Phe Ser Leu 635 Ser Gly Gly Tyr Trp Asn Ser Val Ser Asp Thr Ala Lys Asp Leu Val Ser Lys Met Leu His Val Asp Pro His Gln Arg Leu Thr Ala Ala Leu Val Leu Arg His Pro Trp Ile Val His Trp Asp Gln Leu Pro Gln Tyr 680 Gln Leu Asn Arg Gln Asp Ala Pro His Leu Val Lys Gly Ala Met Ala Ala Thr Tyr Ser Ala Leu Asn Arg Asn Gln Ser Pro Val Leu Glu Pro 710 Val Gly Arg Ser Thr Leu Ala Gln Arg Arg Gly Ile Lys Lys Ile Thr 730 Ser Thr Ala Leu 740 <210> 266 <211> 740 <212> PRT <213> Homo sapiens <400> 266 Met Pro Leu Ala Gln Leu Ala Asp Pro Trp Gln Lys Met Ala Val Glu 10 Ser Pro Ser Asp Ser Ala Glu Asn Gly Gln Gln Ile Met Asp Glu Pro 20 Met Gly Glu Glu Ile Asn Pro Gln Thr Glu Glu Val Ser Ile Lys Glu Ile Ala Ile Thr His His Val Lys Glu Gly His Glu Lys Ala Asp

Pro Ser Gln Phe Glu Leu Leu Lys Val Leu Gly Gln Gly Ser Phe Gly

75

70

Lys	Val	Phe	Leu	Val 85	Lys	Lys	Ile	Ser	Gly 90	Ser	Asp	Ala	Arg	Gln 95	Leu
Tyr	Ala	Met	Lys 100	Val	Leu	Lys	Lys	Ala 105	Thr	Leu	Lys	Val	Arg 110	Asp	Arg
Val	Arg	Thr 115	Lys	Met	Glu	Arg	Asp 120	Ile	Leu	Val	Glu	Val 125	Asn	His	Pro
Phe	Ile 130	Val	Lys	Leu	His	Tyr 135	Ala	Phe	Gln	Thr	Glu 140	Gly	Lys	Leu	Tyr
Leu 145	Ile	Leu	Asp	Phe	Leu 150	Arg	Gly	Gly	Asp	Leu 155	Phe	Thr	Arg	Leu	Ser 160
Lys	Glu	Val	Met	Phe 165	Thr	Glu	Glu	Asp	Val 170	Lys	Phe	Tyr	Leu	Ala 175	Glu
Leu	Ala	Leu	Ala 180	Leu	Asp	His	Leu	His 185	Ser	Leu	Gly	Ile	Ile 190	Tyr	Arg
Asp	Leu	Lys 195	Pro	Glu	Asn	Ile	Leu 200	Leu	Asp	Glu	Glu	Gly 205	His	Ile	Lys
Leu	Thr 210	Asp	Phe	Gly	Leu	Ser 215	Lys	Glu	Ser	Ile	Asp 220	His	Glu	Lys	Lys
Ala 225	Tyr	Ser	Phe	Cys	Gly 230	Thr	Val	Glu	Tyr	Met 235	Ala	Pro	Glu	Val	Val 240
Asn	Arg	Arg	Gly	His 245	Thr	Gln	Ser	Ala	Asp 250	Trp	Trp	Ser	Phe	Gly 255	Val
Leu	Met	Phe	Glu 260	Met	Leu	Thr	Gly	Thr 265	Leu	Pro	Phe	Gln	Gly 270	Lys	Asp
Arg	Lys	Glu 275	Thr	Met	Thr	Met	Ile 280	Leu	Lys	Ala	Lys	Leu 285	Gly	Met	Pro
Gln	Phe 290	Leu	Ser	Pro	Glu	Ala 295	Gln	Ser	Leu	Leu	Arg 300	Met	Leu	Phe	Lys
Arg 305	Asn	Pro	Ala	Asn	Arg 310	Leu	Gly	Ala	Gly	Pro 315	Asp	Gly	Val	Glu	Glu 320
Ile	Lys	Arg	His	Ser 325	Phe	Phe	Ser	Thr	Ile 330	Asp	Trp	Asn	Lys	Leu 335	Tyr
Arg	Arg	Glu	Ile 340	His	Pro	Pro	Phe	Lys 345	Pro	Ala	Thr	Gly	Arg 350	Pro	Glu
Asp	Thr	Phe 355	Tyr	Phe	Asp	Pro	Glu 360	Phe	Thr	Ala	Lys	Thr 365	Pro	Lys	Asp
Ser	Pro 370	Gly	Ile	Pro	Pro	Ser 375	Ala	Asn	Ala	His	Gln 380	Leu	Phe	Arg	Gly

Phe 385	Ser	Phe	Val	Ala	Ile 390	Thr	Ser	Asp	Asp	Glu 395	Ser	Gln	Ala	Met	Gln 400
Thr	Val	Gly	Val	His 405	Ser	Ile	Val	Gln	Gln 410	Leu	His	Arg	Asn	Ser 415	Ile
Gln	Phe	Thr	Asp 420	Gly	Tyr	Glu	Val	Lys 425	Glu	Asp	Ile	Gly	Val 430	Gly	Ser
Tyr	Ser	Val 435	Cys	Lys	Arg	Cys	Ile 440	His	Lys	Ala	Thr	Asn 445	Met	Glu	Phe
Ala	Val 450	Lys	Ile	Ile	Asp	Lys 455	Ser	Lys	Arg	Asp	Pro 460	Thr	Glu	Glu	Ile
Glu 465	Ile	Leu	Leu	Arg	Tyr 470	Gly	Gln	His	Pro	Asn 475	Ile	Ile	Thr	Leu	Lys 480
Asp	Val	Tyr	Asp	Asp 485	Gly	Lys	Tyr	Val	Tyr 490	Val	Val	Thr	Glu	Leu 495	Met
Lys	Gly	Gly	Glu 500	Leu	Leu	Asp	Lys	Ile 505	Leu	Arg	Gln	Lys	Phe 510	Phe	Ser
Glu	Arg	Glu 515	Ala	Ser	Ala	Val	Leu 520	Phe	Thr	Ile	Thr	Lys 525	Thr	Val	Glu
Tyr	Leu 530	His	Ala	Gln	Gly	Val 535	Val	His	Arg	Asp	Leu 540	Lys	Pro	Ser	Asn
Ile 545	Leu	Tyr	Val	Asp	Glu 550	Ser	Gly	Asn	Pro	Glu 555	Ser	Ile	Arg	Ile	Cys 560
Asp	Phe	Gly	Phe	Ala 565	Lys	Gln	Leu	Arg	Ala 570	Glu	Asn	Gly	Leu	Leu 575	Met
Thr	Pro	Cys	Tyr 580	Thr	Ala	Asn	Phe	Val 585	Ala	Pro	Glu	Val	Leu 590	Lys	Arg
Gln	Gly	Tyr 595	Asp	Ala	Ala	Cys	Asp 600	Ile	Trp	Ser	Leu	Gly 605	Val	Leu	Leu
Tyr	Thr 610	Met	Leu	Thr	Gly	Tyr 615	Thr	Pro	Phe	Ala	Asn 620	Gly	Pro	Asp	Asp
Thr 625	Pro	Glu	Glu	Ile	Leu 630	Ala	Arg	Ile	Gly	Ser 635	Gly	Lys	Phe	Ser	Leu 640
Ser	Gly	Gly	Tyr	Trp 645	Asn	Ser	Val	Ser	Asp 650	Thr	Ala	Lys	Asp	Leu 655	Val
Ser	Lys	Met	Leu 660	His	Val	Asp	Pro	His 665	Gln	Arg	Leu	Thr	Ala 670	Ala	Leu
Val	Leu	Arg 675	His	Pro	Trp	Ile	Val 680	His	Trp	Asp	Gln	Leu 685	Pro	Gln	Tyr

Gln Leu Asn Arg Gln Asp Ala Pro His Leu Val Lys Gly Ala Met Ala 690 695 700

Ala Thr Tyr Ser Ala Leu Asn Arg Asn Gln Ser Pro Val Leu Glu Pro 705 710 715 720

Val Gly Arg Ser Thr Leu Ala Gln Arg Arg Gly Ile Lys Lys Ile Thr 725 730 735

Ser Thr Ala Leu 740

<210> 267

<211> 1374

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<213> Homo sapiens

<400> 267

Met Ser Thr Glu Ala Asp Glu Gly Ile Thr Phe Ser Val Pro Pro Phe 1 5 10 15

Ala Pro Ser Gly Phe Cys Thr Ile Pro Glu Gly Gly Ile Cys Arg Arg 20 25 30

Gly Gly Ala Ala Ala Val Gly Glu Glu Glu His Gln Leu Pro Pro 35 40 45

Pro Pro Pro Gly Ser Phe Trp Asn Val Glu Ser Ala Ala Pro Gly 50 55 60

Ile Gly Cys Pro Ala Ala Thr Ser Ser Ser Ser Ala Thr Arg Gly Arg 65 70 75 80

Gly Ser Ser Val Gly Gly Gly Ser Arg Arg Thr Thr Val Ala Tyr Val 85 90 95

Ile Asn Glu Ala Ser Gln Gly Gln Leu Val Val Ala Glu Ser Glu Ala 100 105 110

Leu Gln Ser Leu Arg Glu Ala Cys Glu Thr Val Gly Ala Thr Leu Glu 115 120 125

Thr Leu His Phe Gly Lys Leu Asp Phe Gly Glu Thr Thr Val Leu Asp 130 135 140

Arg Phe Tyr Asn Ala Asp Ile Ala Val Val Glu Met Ser Asp Ala Phe 145 150 155 160

Arg Gln Pro Ser Leu Phe Tyr His Leu Gly Val Arg Glu Ser Phe Ser 165 170 175

Met Ala Asn Asn Ile Ile Leu Tyr Cys Asp Thr Asn Ser Asp Ser Leu 180 185 190

Gln Ser Leu Lys Glu Ile Ile Cys Gln Lys Asn Thr Met Cys Thr Gly

Asn	Tyr 210	Thr	Phe	Val	Pro	Tyr 215	Met	Ile	Thr	Pro	His 220	Asn	Lys	Val	Tyr
Cys 225	Cys	Asp	Ser	Ser	Phe 230	Met	Lys	Gly	Leu	Thr 235	Glu	Leu	Met	Gln	Pro 240
Asn	Phe	Glu	Leu	Leu 245	Leu	Gly	Pro	Ile	Cys 250	Leu	Pro	Leu	Val	Asp 255	Arg
Phe	Ile	Gln	Leu 260	Leu	Lys	Val	Ala	Gln 265	Ala	Ser	Ser	Ser	Gln 270	Tyr	Phe
Arg	Glu	Ser 275	Ile	Leu	Asn	Asp	Ile 280	Arg	Lys	Ala	Arg	Asn 285	Leu	Tyr	Thr
Gly	Lys 290	Glu	Leu	Ala	Ala	Glu 295	Leu	Ala	Arg	Ile	Arg 300	Gln	Arg	Val	Asp
Asn 305	Ile	Glu	Val	Leu	Thr 310	Ala	Asp	Ile	Val	Ile 315	Asn	Leu	Leu	Leu	Ser 320
Tyr	Arg	Asp	Ile	Gln 325	Asp	Tyr	Asp	Ser	Ile 330	Val	Lys	Leu	Val	Glu 335	Thr
Leu	Glu	Lys	Leu 340	Pro	Thr	Phe	Asp	Leu 345	Ala	Ser	His	His	His 350	Val	Lys
Phe	His	Tyr 355	Ala	Phe	Ala	Leu	Asn 360	Arg	Arg	Asn	Leu	Pro 365	Gly	Asp	Arg
Ala	Lys 370	Ala	Leu	Asp	Ile	Met 375	Ile	Pro	Met	Val	Gln 380	Ser	Glu	Gly	Gln
Val 385	Ala	Ser	Asp	Met	Tyr 390	Cys	Leu	Val	Gly	Arg 395	Ile	Tyr	Lys	Asp	Met 400
Phe	Leu	Asp	Ser	Asn 405	Phe	Thr	Asp	Thr	Glu 410	Ser	Arg	Asp	His	Gly 415	Ala
Ser	Trp	Phe	Lys 420	Lys	Ala	Phe	Glu	Ser 425	Glu	Pro	Thr	Leu	Gln 430	Ser	Gly
Ile	Asn	Tyr 435	Ala	Val	Leu	Leu	Leu 440	Ala	Ala	Gly	His	Gln 445	Phe	Glu	Ser
Ser	Phe 450	Glu	Leu	Arg	Lys	Val 455	Gly	Val	Lys	Leu	Ser 460	Ser	Leu	Leu	Gly
Lys 465	Lys	Gly	Asn	Leu	Glu 470	Lys	Leu	Gln	Ser	Tyr 475	Trp	Glu	Val	Gly	Phe 480
Phe	Leu	Gly	Ala	Ser 485	Val	Leu	Ala	Asn	Asp 490	His	Met	Arg	Val	Ile 495	Gln
Ala	Ser	Glu	Lys	Leu	Phe	Lys	Leu	Lys	Thr	Pro	Ala	Trp	Tyr	Leu	Lys

Ser Ile Val Glu Thr Ile Leu Ile Tyr Lys His Phe Val Lys Leu Thr 515 520 Thr Glu Gln Pro Val Ala Lys Gln Glu Leu Val Asp Phe Trp Met Asp 535 Phe Leu Val Glu Ala Thr Lys Thr Asp Val Thr Val Val Arg Phe Pro 550 555 Val Leu Ile Leu Glu Pro Thr Lys Ile Tyr Gln Pro Ser Tyr Leu Ser Ile Asn Asn Glu Val Glu Glu Lys Thr Ile Ser Ile Trp His Val Leu 585 Pro Asp Asp Lys Lys Gly Ile His Glu Trp Asn Phe Ser Ala Ser Ser 600 Val Arg Gly Val Ser Ile Ser Lys Phe Glu Glu Arg Cys Cys Phe Leu 615 Tyr Val Leu His Asn Ser Asp Phe Gln Ile Tyr Phe Cys Thr Glu 630 635 Leu His Cys Lys Lys Phe Phe Glu Met Val Asn Thr Ile Thr Glu Glu 645 Lys Gly Arg Ser Thr Glu Glu Gly Asp Cys Glu Ser Asp Leu Leu Glu Tyr Asp Tyr Glu Tyr Asp Glu Asn Gly Asp Arg Val Val Leu Gly Lys Gly Thr Tyr Gly Ile Val Tyr Ala Gly Arg Asp Leu Ser Asn Gln Val Arg Ile Ala Ile Lys Glu Ile Pro Glu Arg Asp Ser Arg Tyr Ser Gln 710 Pro Leu His Glu Glu Ile Ala Leu His Lys His Leu Lys His Lys Asn 725 730 735 Ile Val Gln Tyr Leu Gly Ser Phe Ser Glu Asn Gly Phe Ile Lys Ile Phe Met Glu Gln Val Pro Gly Gly Ser Leu Ser Ala Leu Leu Arg Ser 760 Lys Trp Gly Pro Leu Lys Asp Asn Glu Gln Thr Ile Gly Phe Tyr Thr 770 775 Lys Gln Ile Leu Glu Gly Leu Lys Tyr Leu His Asp Asn Gln Ile Val 790 795 785

His Arg Asp Ile Lys Gly Asp Asn Val Leu Ile Asn Thr Tyr Ser Gly

- Val Leu Lys Ile Ser Asp Phe Gly Thr Ser Lys Arg Leu Ala Gly Ile 820 825 830
- Asn Pro Cys Thr Glu Thr Phe Thr Gly Thr Leu Gln Tyr Met Ala Pro 835 840 845
- Glu Ile Ile Asp Lys Gly Pro Arg Gly Tyr Gly Lys Ala Ala Asp Ile 850 855 860
- Trp Ser Leu Gly Cys Thr Ile Ile Glu Met Ala Thr Gly Lys Pro Pro 865 870 875 880
- Phe Tyr Glu Leu Gly Glu Pro Gln Ala Ala Met Phe Lys Val Gly Met 885 890 895
- Phe Lys Val His Pro Glu Ile Pro Glu Ser Met Ser Ala Glu Ala Lys 900 905 910
- Ala Phe Ile Leu Lys Cys Phe Glu Pro Asp Pro Asp Lys Arg Ala Cys 915 920 925
- Ala Asn Asp Leu Leu Val Asp Glu Phe Leu Lys Val Ser Ser Lys Lys 930 935 940
- Lys Lys Thr Gln Pro Lys Leu Ser Ala Leu Ser Ala Gly Ser Asn Glu 945 950 955 960
- Tyr Leu Arg Ser Ile Ser Leu Pro Val Pro Val Leu Val Glu Asp Thr 965 970 975
- Ser Ser Ser Ser Glu Tyr Gly Ser Val Ser Pro Asp Thr Glu Leu Lys 980 985 990
- Val Asp Pro Phe Ser Phe Lys Thr Arg Ala Lys Ser Cys Gly Glu Arg 995 1000 1005
- Asp Val Lys Gly Ile Arg Thr Leu Phe Leu Gly Ile Pro Asp Glu 1010 1015 1020
- Asn Phe Glu Asp His Ser Ala Pro Pro Ser Pro Glu Glu Lys Asp 1025 1030 1035
- Ser Gly Phe Phe Met Leu Arg Lys Asp Ser Glu Arg Arg Ala Thr 1040 1045 1050
- Leu His Arg Ile Leu Thr Glu Asp Gln Asp Lys Ile Val Arg Asn 1055 1060 1065
- Leu Met Glu Ser Leu Ala Gln Gly Ala Glu Glu Pro Lys Leu Lys 1070 1075 1080
- Trp Glu His Ile Thr Thr Leu Ile Ala Ser Leu Arg Glu Phe Val 1085 1090 1095
- Arg Ser Thr Asp Arg Lys Ile Ile Ala Thr Thr Leu Ser Lys Leu

Lys Leu Glu Leu Asp Phe Asp Ser His Gly Ile Ser Gln Val Gln Val Val Leu Phe Gly Phe Gln Asp Ala Val Asn Lys Val Leu Arg Asn His Asn Ile Lys Pro His Trp Met Phe Ala Leu Asp Ser Ile Ile Arg Lys Ala Val Gln Thr Ala Ile Thr Ile Leu Val Pro Glu Leu Arg Pro His Phe Ser Leu Ala Ser Glu Ser Asp Thr Ala Asp Gln Glu Asp Leu Asp Val Glu Asp Asp His Glu Glu Gln Pro Ser Asn Gln Thr Val Arg Arg Pro Gln Ala Val Ile Glu Asp Ala Val Ala Thr Ser Gly Val Ser Thr Leu Ser Ser Thr Val Ser His Asp Ser Gln Ser Ala His Arg Ser Leu Asn Val Gln Leu Gly Arg Met Lys Ile Glu Thr Asn Arg Leu Leu Glu Glu Leu Val Arg Lys Glu Lys Glu Leu Gln Ala Leu Leu His Arg Ala Ile Glu Glu Lys Asp Gln Glu Ile Lys His Leu Lys Leu Lys Ser Gln Pro Ile Glu Ile Pro Glu Leu Pro Val Phe His Leu Asn Ser Ser Gly Thr Asn Thr Glu Asp Ser Glu Leu Thr Asp Trp Leu Arg Val Asn Gly Ala Asp Glu Asp Thr Ile Ser Arg Phe Leu Ala Glu Asp Tyr Thr Leu Leu Asp Val Leu Tyr Tyr Val Thr Arg Asp Asp Leu Lys Cys Leu Arg Leu Arg Gly Gly Met Leu Cys Thr Leu Trp Lys Ala Ile Ile Asp

Phe Arg Asn Lys Gln Thr

<211> 729

<212> PRT

<213> Homo sapiens

<400> 268

Met Gln Ser Thr Ser Asn His Leu Trp Leu Leu Ser Asp Ile Leu Gly
1 10 15

Gln Gly Ala Thr Ala Asn Val Phe Arg Gly Arg His Lys Lys Thr Gly
20 25 30

Asp Leu Phe Ala Ile Lys Val Phe Asn Asn Ile Ser Phe Leu Arg Pro 35 40 45

Val Asp Val Gln Met Arg Glu Phe Glu Val Leu Lys Lys Leu Asn His 50 60

Lys Asn Ile Val Lys Leu Phe Ala Ile Glu Glu Glu Thr Thr Arg
65 70 75 80

His Lys Val Leu Ile Met Glu Phe Cys Pro Cys Gly Ser Leu Tyr Thr 85 90 95

Val Leu Glu Glu Pro Ser Asn Ala Tyr Gly Leu Pro Glu Ser Glu Phe 100 105 110

Leu Ile Val Leu Arg Asp Val Val Gly Gly Met Asn His Leu Arg Glu
115 120 125

Asn Gly Ile Val His Arg Asp Ile Lys Pro Gly Asn Ile Met Arg Val 130 135 140

Ile Gly Glu Asp Gly Gln Ser Val Tyr Lys Leu Thr Asp Phe Gly Ala 145 150 155 160

Ala Arg Glu Leu Glu Asp Asp Glu Gln Phe Val Ser Leu Tyr Gly Thr 165 170 175

Glu Glu Tyr Leu His Pro Asp Met Tyr Glu Arg Ala Val Leu Arg Lys 180 185 190

Asp His Gln Lys Lys Tyr Gly Ala Thr Val Asp Leu Trp Ser Ile Gly
195 200 205

Val Thr Phe Tyr His Ala Ala Thr Gly Ser Leu Pro Phe Arg Pro Phe 210 215 220

Glu Gly Pro Arg Arg Asn Lys Glu Val Met Tyr Lys Ile Ile Thr Gly 225 230 235 240

Lys Pro Ser Gly Ala Ile Ser Gly Val Gln Lys Ala Glu Asn Gly Pro 245 250 255

Ile Asp Trp Ser Gly Asp Met Pro Val Ser Cys Ser Leu Ser Arg Gly 260 265 270

Leu Gln Val Leu Leu Thr Pro Val Leu Ala Asn Ile Leu Glu Ala Asp 275 Gln Glu Lys Cys Trp Gly Phe Asp Gln Phe Phe Ala Glu Thr Ser Asp Ile Leu His Arg Met Val Ile His Val Phe Ser Leu Gln Gln Met Thr Ala His Lys Ile Tyr Ile His Ser Tyr Asn Thr Ala Thr Ile Phe His Glu Leu Val Tyr Lys Gln Thr Lys Ile Ile Ser Ser Asn Gln Glu Leu Ile Tyr Glu Gly Arg Arg Leu Val Leu Glu Pro Gly Arg Leu Ala Gln 360 His Phe Pro Lys Thr Thr Glu Glu Asn Pro Ile Phe Val Val Ser Arg Glu Pro Leu Asn Thr Ile Gly Leu Ile Tyr Glu Lys Ile Ser Leu Pro 390 395 Lys Val His Pro Arg Tyr Asp Leu Asp Gly Asp Ala Ser Met Ala Lys Ala Ile Thr Gly Val Val Cys Tyr Ala Cys Arg Ile Ala Ser Thr Leu Leu Leu Tyr Gln Glu Leu Met Arg Lys Gly Ile Arg Trp Leu Ile Glu Leu Ile Lys Asp Asp Tyr Asn Glu Thr Val His Lys Lys Thr Glu Val 455 Val Ile Thr Leu Asp Phe Cys Ile Arg Asn Ile Glu Lys Thr Val Lys 470 Val Tyr Glu Lys Leu Met Lys Ile Asn Leu Glu Ala Ala Glu Leu Gly Glu Ile Ser Asp Ile His Thr Lys Leu Leu Arg Leu Ser Ser Gln 500 Gly Thr Ile Glu Thr Ser Leu Gln Asp Ile Asp Ser Arg Leu Ser Pro Gly Gly Ser Leu Ala Asp Ala Trp Ala His Gln Glu Gly Thr His Pro 530 Lys Asp Arg Asn Val Glu Lys Leu Gln Val Leu Leu Asn Cys Met Thr

Glu Ile Tyr Tyr Gln Phe Lys Lys Asp Lys Ala Glu Arg Arg Leu Ala

570

Tyr Asn Glu Glu Gln Ile His Lys Phe Asp Lys Gln Lys Leu Tyr Tyr His Ala Thr Lys Ala Met Thr His Phe Thr Asp Glu Cys Val Lys Lys Tyr Glu Ala Phe Leu Asn Lys Ser Glu Glu Trp Ile Arg Lys Met Leu His Leu Arg Lys Gln Leu Leu Ser Leu Thr Asn Gln Cys Phe Asp Ile Glu Glu Glu Val Ser Lys Tyr Gln Glu Tyr Thr Asn Glu Leu Gln Glu Thr Leu Pro Gln Lys Met Phe Thr Ala Ser Ser Gly Ile Lys His Thr 660 670 Met Thr Pro Ile Tyr Pro Ser Ser Asn Thr Leu Val Glu Met Thr Leu 680 Gly Met Lys Lys Leu Lys Glu Glu Met Glu Gly Val Val Lys Glu Leu 695 Ala Glu Asn Asn His Ile Leu Glu Arg Phe Gly Ser Leu Thr Met Asp 705 715 Gly Gly Leu Arg Asn Val Asp Cys Leu 725 <210> 269 <211> 422 <212> PRT <213> Homo sapiens <400> 269 Met Ser Leu His Phe Leu Tyr Tyr Cys Ser Glu Pro Thr Leu Asp Val Lys Ile Ala Phe Cys Gln Gly Phe Asp Lys Gln Val Asp Val Ser Tyr Ile Ala Lys His Tyr Asn Met Ser Lys Ser Lys Val Asp Asn Gln Phe Tyr Ser Val Glu Val Gly Asp Ser Thr Phe Thr Val Leu Lys Arg Tyr Gln Asn Leu Lys Pro Ile Gly Ser Gly Ala Gln Gly Ile Val Cys Ala

Ala Tyr Asp Ala Val Leu Asp Arg Asn Val Ala Ile Lys Lys Leu Ser

Arg Pro Phe Gln Asn Gln Thr His Ala Lys Arg Ala Tyr Arg Glu Leu

105

110

Val	Leu	Met 115	Lys	Cys	Val	Asn	His 120	Lys	Asn	Ile	Ile	Ser 125	Leu	Leu	Asn
Val	Phe 130	Thr	Pro	Gln	Lys	Thr 135	Leu	Glu	Glu	Phe	Gln 140	Asp	Val	Tyr	Leu
Val 145	Met	Glu	Leu	Met	Asp 150	Ala	Asn	Leu	Cys	Gln 155	Val	Ile	Gln	Met	Glu 160
Leu	Asp	His	Glu	Arg 165	Met	Ser	Tyr	Leu	Leu 170	Tyr	Gln	Met	Leu	Cys 175	Gly
Ile	Lys	His	Leu 180	His	Ser	Ala	Gly	Ile 185	Ile	His	Arg	Asp	Leu 190	Lys	Pro
Ser	Asn	Ile 195	Val	Val	Lys	Ser	Asp 200	Cys	Thr	Leu	Lys	Ile 205	Leu	Asp	Phe
Gly	Leu 210	Ala	Arg	Thr	Ala	Gly 215	Thr	Ser	Phe	Met	Met 220	Thr	Pro	Tyr	Val
Val 225	Thr	Arg	Tyr	Tyr	Arg 230	Ala	Pro	Glu	Val	Ile 235	Leu	Gly	Met	Gly	Tyr 240
Lys	Glu	Asn	Val	Asp 245	Ile	Trp	Ser	Val	Gly 250	Cys	Ile	Met	Gly	Glu 255	Met
Val	Arg	His	Lys 260	Ile	Leu	Phe	Pro	Gly 265	Arg	Asp	Tyr	Ile	Asp 270	Gln	Trp
Asn	Lys	Val 275	Ile	Glu	Gln	Leu	Gly 280	Thr	Pro	Cys	Pro	Glu 285	Phe	Met	Lys
Lys	Leu 290	Gln	Pro	Thr	Val	Arg 295	Asn	Tyr	Val	Glu	Asn 300	Arg	Pro	Lys	Tyr
Ala 305	Gly	Leu	Thr	Phe	Pro 310	Lys	Leu	Phe	Pro	Asp 315	Ser	Leu	Phe	Pro	Ala 320
Asp	Ser	Glu	His	Asn 325	Lys	Leu	Lys	Ala	Ser 330	Gln	Ala	Arg	Asp	Leu 335	Leu
Ser	Lys	Met	Leu 340	Val	Ile	Asp	Pro	Ala 345	Lys	Arg	Ile	Ser	Val 350	Asp	Asp
Ala	Leu	Gln 355	His	Pro	Tyr	Ile	Asn 360	Val	Trp	Tyr	Asp	Pro 365	Ala	Glu	Val
Glu	Ala 370	Pro	Pro	Pro	Gln	Ile 375	Tyr	Asp	Lys	Gln	Leu 380	Asp	Glu	Arg	Glu
His 385	Thr	Ile	Glu	Glu	Trp 390	Lys	Glu	Leu	Ile	Tyr 395	Lys	Glu	Val	Met	Asn 400
Ser	Glu	Glu	Lys	Thr 405	Lys	Asn	Gly	Val	Val 410	Lys	Gly	Gln	Pro	Ser 415	Pro

Ser Ala Gln Val Gln Gln 420

<210> 270

<211> 422

<212> PRT

<213> Homo sapiens

<400> 270

Met Ser Leu His Phe Leu Tyr Tyr Cys Ser Glu Pro Thr Leu Asp Val 1 5 10 15

Lys Ile Ala Phe Cys Gln Gly Phe Asp Lys Gln Val Asp Val Ser Tyr 20 25 30

Ile Ala Lys His Tyr Asn Met Ser Lys Ser Lys Val Asp Asn Gln Phe 35 40 45

Tyr Ser Val Glu Val Gly Asp Ser Thr Phe Thr Val Leu Lys Arg Tyr
50 55 60

Gln Asn Leu Lys Pro Ile Gly Ser Gly Ala Gln Gly Ile Val Cys Ala 65 70 75 80

Ala Tyr Asp Ala Val Leu Asp Arg Asn Val Ala Ile Lys Lys Leu Ser 85 90 95

Arg Pro Phe Gln Asn Gln Thr His Ala Lys Arg Ala Tyr Arg Glu Leu 100 105 110

Val Leu Met Lys Cys Val Asn His Lys Asn Ile Ile Ser Leu Leu Asn 115 120 125

Val Phe Thr Pro Gln Lys Thr Leu Glu Glu Phe Gln Asp Val Tyr Leu 130 135 140

Val Met Glu Leu Met Asp Ala Asn Leu Cys Gln Val Ile Gln Met Glu 145 150 155 160

Leu Asp His Glu Arg Met Ser Tyr Leu Leu Tyr Gln Met Leu Cys Gly
165 170 175

Ile Lys His Leu His Ser Ala Gly Ile Ile His Arg Asp Leu Lys Pro 180 185 190

Ser Asn Ile Val Val Lys Ser Asp Cys Thr Leu Lys Ile Leu Asp Phe 195 200 205

Gly Leu Ala Arg Thr Ala Gly Thr Ser Phe Met Met Thr Pro Tyr Val 210 215 220

Val Thr Arg Tyr Tyr Arg Ala Pro Glu Val Ile Leu Gly Met Gly Tyr 225 230 235 240

Lys Glu Asn Val Asp Ile Trp Ser Val Gly Cys Ile Met Gly Glu Met

245 250 255

Val Arg His Lys Ile Leu Phe Pro Gly Arg Asp Tyr Ile Asp Gln Trp
260 265 270

Asn Lys Val Ile Glu Gln Leu Gly Thr Pro Cys Pro Glu Phe Met Lys 275 280 285

Lys Leu Gln Pro Thr Val Arg Asn Tyr Val Glu Asn Arg Pro Lys Tyr 290 295 300

Ala Gly Leu Thr Phe Pro Lys Leu Phe Pro Asp Ser Leu Phe Pro Ala 305 310 315 320

Asp Ser Glu His Asn Lys Leu Lys Ala Ser Gln Ala Arg Asp Leu Leu 325 330 335

Ser Lys Met Leu Val Ile Asp Pro Ala Lys Arg Ile Ser Val Asp Asp 340 345 350

Ala Leu Gln His Pro Tyr Ile Asn Val Trp Tyr Asp Pro Ala Glu Val 355 360 365

Glu Ala Pro Pro Gln Ile Tyr Asp Lys Gln Leu Asp Glu Arg Glu 370 375 380

His Thr Ile Glu Glu Trp Lys Glu Leu Ile Tyr Lys Glu Val Met Asn 385 390 395 400

Ser Glu Glu Lys Thr Lys Asn Gly Val Val Lys Gly Gln Pro Ser Pro 405 410 415

Ser Ala Gln Val Gln Gln 420

<210> 271

<211> 465

<212> PRT

<213> Homo sapiens

<400> 271

Met Ala Met Thr Gly Ser Thr Pro Cys Ser Ser Met Ser Asn His Thr

Lys Glu Arg Val Thr Met Thr Lys Val Thr Leu Glu Asn Phe Tyr Ser 20 25 30

Asn Leu Ile Ala Gln His Glu Glu Arg Glu Met Arg Gln Lys Lys Leu 35 40 45

Glu Lys Val Met Glu Glu Glu Gly Leu Lys Asp Glu Glu Lys Arg Leu 50 55 60

Arg Arg Ser Ala His Ala Arg Lys Glu Thr Glu Phe Leu Arg Leu Lys 65 70 75 80

Arg	Thr	Arg	Leu	85 85	Leu	GIU	Asp	Pne	90	ser	Leu	гÀг	vai	95	GIY
Arg	Gly	Ala	Phe 100	Gly	Glu	Val	Arg	Leu 105	Val	Gln	Lys	Lys	Asp 110	Thr	Gly
His	Val	Tyr 115	Ala	Met	Lys	Ile	Leu 120	Arg	Lys	Ala	Asp	Met 125	Leu	Glu	Lys
Glu	Gln 130	Val	Gly	His	Ile	Arg 135	Ala	Glu	Arg	Asp	Ile 140	Leu	Val	Glu	Ala
Asp 145	Ser	Leu	Trp	Val	Val 150	Lys	Met	Phe	Tyr	Ser 155	Phe	Gln	Asp	Lys	Leu 160
Asn	Leu	Tyr	Leu	Ile 165	Met	Glu	Phe	Leu	Pro 170	Gly	Gly	Asp	Met	Met 175	Thr
Leu	Leu	Met	Lys 180	Lys	Asp	Thr	Leu	Thr 185	Glu	Glu	Glu	Thr	Gln 190	Phe	Tyr
		195			Leu		200					205			
	210					215					220				Gly
225		-			Asp 230		_		-	235	-		_	_	240
				245	Tyr				250					255	
			260		Met			265					270	_	
_		275			Leu		280					285			
	290				Phe	295					300				
305					Val 310					315					320
Pro	Phe	Cys	Ser	Glu 325	Thr	Pro	Gln	Glu	Thr 330	Tyr	Lys	Lys	Val	Met 335	Asn
Trp	Lys	Glu	Thr 340	Leu	Thr	Phe	Pro	Pro 345	Glu	Val	Pro	Ile	Ser 350	Glu	Lys
Ala	Lys	Asp 355	Leu	Ile	Leu	Arg	Phe 360	Cys	Cys	Glu	Trp	Glu 365	His	Arg	Ile
Gly	Ala 370	Pro	Gly	Val	Glu	Glu 375	Ile	Lys	Ser	Asn	Ser 380	Phe	Phe	Glu	Gly

Val Asp Trp Glu His Ile Arg Glu Arg Pro Ala Ala Ile Ser Ile Glu 385 390 395 400 Ile Lys Ser Ile Asp Asp Thr Ser Asn Phe Asp Glu Phe Pro Glu Ser 410 Asp Ile Leu Lys Pro Thr Val Ala Thr Ser Asn His Pro Glu Thr Asp 425 Tyr Lys Asn Lys Asp Trp Val Phe Ile Asn Tyr Thr Tyr Lys Arg Phe 435 440 Glu Gly Leu Thr Ala Arg Gly Ala Ile Pro Ser Tyr Met Lys Ala Ala 455 460 Lys 465 <210> 272 <211> 547 <212> PRT <213> Homo sapiens <400> 272 Met Ala Glu Pro Ser Gly Ser Pro Val His Val Gln Leu Pro Gln Gln Ala Ala Pro Val Thr Ala Ala Ala Ala Ala Pro Ala Ala Thr 20 Ala Ala Pro Ala Pro Ala Ala Pro Ala Pro Ala Pro Ala Pro Ala Pro Ala Pro Ala Ala Gln Ala Val Gly Trp Pro Ile Cys Arg Asp Ala Tyr Glu Leu Gln Glu Val Ile Gly Ser Gly Ala Thr Ala Val Val Gln 65 Ala Ala Leu Cys Lys Pro Arg Gln Glu Arg Val Ala Ile Lys Arg Ile 90 Asn Leu Glu Lys Cys Gln Thr Ser Met Asp Glu Leu Leu Lys Glu Ile 105 Gln Ala Met Ser Gln Cys Ser His Pro Asn Val Val Thr Tyr Tyr Thr 115 120 125 Ser Phe Val Val Lys Asp Glu Leu Trp Leu Val Met Lys Leu Leu Ser 135 Gly Gly Ser Met Leu Asp Ile Ile Lys Tyr Ile Val Asn Arg Gly Glu 145 150 155 His Lys Asn Gly Val Leu Glu Glu Ala Ile Ile Ala Thr Ile Leu Lys 165 170 175

Glu	Val	Leu	Glu 180	Gly	Leu	Asp	Tyr	Leu 185	His	Arg	Asn	Gly	Gln 190	Ile	His
Arg	Asp	Leu 195	Lys	Ala	Gly	Asn	Ile 200	Leu	Leu	Gly	Glu	Asp 205	Gly	Ser	Val
Gln	Ile 210	Ala	Asp	Phe	Gly	Val 215	Ser	Ala	Phe	Leu	Ala 220	Thr	Gly	Gly	Asp
Val 225	Thr	Arg	Asn	Lys	Val 230	Arg	Lys	Thr	Phe	Val 235	Gly	Thr	Pro	Cys	Trp 240
Met	Ala	Pro	Glu	Val 245	Met	Glu	Gln	Val	Arg 250	Gly	Tyr	Asp	Phe	Lys 255	Ala
Asp	Met	Trp	Ser 260	Phe	Gly	Ile	Thr	Ala 265	Ile	Glu	Leu	Ala	Thr 270	Gly	Ala
Ala	Pro	Tyr 275	His	Lys	Tyr	Pro	Pro 280	Met	Lys	Val	Leu	Met 285	Leu	Thr	Leu
Gln	Asn 290	Asp	Pro	Pro	Thr	Leu 295	Glu	Thr	Gly	Val	Glu 300	Asp	Lys	Glu	Met
Met 305	Lys	Lys	Tyr	Gly	Lys 310	Ser	Phe	Arg	Lys	Leu 315	Leu	Ser	Leu	Cys	Leu 320
Gln	Lys	Asp	Pro	Ser 325	Lys	Arg	Pro	Thr	Ala 330	Ala	Glu	Leu	Leu	Lys 335	Cys
Lys	Phe	Phe	Gln 340	Lys	Ala	Lys	Asn	Arg 345	Glu	Tyr	Leu	Ile	Glu 350	Lys	Leu
Leu	Thr	Arg 355	Thr	Pro	Asp	Ile	Ala 360	Gln	Arg	Ala	Lys	Lys 365	Val	Arg	Arg
Val	Pro 370	Gly	Ser	Ser	Gly	His 375	Leu	His	Lys	Thr	Glu 380	Asp	Gly	Asp	Trp
Glu 385	Trp	Ser	Asp	Asp	Glu 390	Met	Asp	Glu	Lys	Ser 395	Glu	Glu	Gly	Lys	Ala 400
Ala	Phe	Ser	Gln	Glu 405	Lys	Ser	Arg	Arg	Val 410	Lys	Glu	Glu	Asn	Pro 415	Glu
Ile	Ala	Val	Ser 420	Ala	Ser	Thr	Ile	Pro 425	Glu	Gln	Ile	Gln	Ser 430	Leu	Ser
Val	His	Asp 435	Ser	Gln	Gly	Pro	Pro 440	Asn	Ala	Asn	Glu	Asp 445	Tyr	Arg	Glu
Ala	Ser 450	Ser	Cys	Ala	Val	Asn 455	Leu	Val	Leu	Arg	Leu 460	Arg	Asn	Ser	Arg
Lys 465	Glu	Leu	Asn	Asp	Ile 470	Arg	Phe	Glu	Phe	Thr 475	Pro	Gly	Arg	Asp	Thr 480

Ala Asp Gly Val Ser Gln Glu Leu Phe Ser Ala Gly Leu Val Asp Gly
485 490 495

His Asp Val Val Ile Val Ala Ala Asn Leu Gln Lys Ile Val Asp Asp
500 505 510

Pro Lys Ala Leu Lys Thr Leu Thr Phe Lys Leu Ala Ser Gly Cys Asp 515 520 525

Gly Ser Glu Ile Pro Asp Glu Val Lys Leu Ile Gly Phe Ala Gln Leu 530 535 540

Ser Val Ser 545

<210> 273

<211> 547

<212> PRT

<213> Homo sapiens

<400> 273

Met Ala Glu Pro Ser Gly Ser Pro Val His Val Gln Leu Pro Gln Gln 1 5 10 15

Ala Ala Pro Val Thr Ala Ala Ala Ala Ala Pro Ala Ala Ala Thr
20 25 30

Ala Ala Pro Ala Pro Ala Ala Pro Ala Pro Ala Pro Ala Pro Ala 35 40 45

Pro Ala Pro Ala Ala Gln Ala Val Gly Trp Pro Ile Cys Arg Asp Ala 50 55 60

Tyr Glu Leu Gln Glu Val Ile Gly Ser Gly Ala Thr Ala Val Val Gln 65 70 75 80

Ala Ala Leu Cys Lys Pro Arg Gln Glu Arg Val Ala Ile Lys Arg Ile 85 90 95

Asn Leu Glu Lys Cys Gln Thr Ser Met Asp Glu Leu Leu Lys Glu Ile 100 105 110

Gln Ala Met Ser Gln Cys Ser His Pro Asn Val Val Thr Tyr Thr 115 120 125

Ser Phe Val Val Lys Asp Glu Leu Trp Leu Val Met Lys Leu Leu Ser 130 135 140

Gly Gly Ser Met Leu Asp Ile Ile Lys Tyr Ile Val Asn Arg Gly Glu 145 150 155 160

His Lys Asn Gly Val Leu Glu Glu Ala Ile Ile Ala Thr Ile Leu Lys 165 170 175

Glu Val Leu Glu Gly Leu Asp Tyr Leu His Arg Asn Gly Gln Ile His

Arg Asp Leu Lys Ala Gly Asn Ile Leu Leu Gly Glu Asp Gly Ser Val 200 Gln Ile Ala Asp Phe Gly Val Ser Ala Phe Leu Ala Thr Gly Gly Asp 215 Val Thr Arg Asn Lys Val Arg Lys Thr Phe Val Gly Thr Pro Cys Trp 235 Met Ala Pro Glu Val Met Glu Gln Val Arg Gly Tyr Asp Phe Lys Ala 245 250 Asp Met Trp Ser Phe Gly Ile Thr Ala Ile Glu Leu Ala Thr Gly Ala 265 Ala Pro Tyr His Lys Tyr Pro Pro Met Lys Val Leu Met Leu Thr Leu 275 280 Gln Asn Asp Pro Pro Thr Leu Glu Thr Gly Val Glu Asp Lys Glu Met 295 Met Lys Lys Tyr Gly Lys Ser Phe Arg Lys Leu Leu Ser Leu Cys Leu 315 Gln Lys Asp Pro Ser Lys Arg Pro Thr Ala Ala Glu Leu Leu Lys Cys 325 Lys Phe Phe Gln Lys Ala Lys Asn Arg Glu Tyr Leu Ile Glu Lys Leu Leu Thr Arg Thr Pro Asp Ile Ala Gln Arg Ala Lys Lys Val Arg Arg 360 Val Pro Gly Ser Ser Gly His Leu His Lys Thr Glu Asp Gly Asp Trp 375 370 Glu Trp Ser Asp Asp Glu Met Asp Glu Lys Ser Glu Glu Gly Lys Ala 390 395 Ala Phe Ser Gln Glu Lys Ser Arg Arg Val Lys Glu Glu Asn Pro Glu 405 Ile Ala Val Ser Ala Ser Thr Ile Pro Glu Gln Ile Gln Ser Leu Ser 420 425 Val His Asp Ser Gln Gly Pro Pro Asn Ala Asn Glu Asp Tyr Arg Glu 440 Ala Ser Ser Cys Ala Val Asn Leu Val Leu Arg Leu Arg Asn Ser Arg 450 455 Lys Glu Leu Asn Asp Ile Arg Phe Glu Phe Thr Pro Gly Arg Asp Thr 470 465 475 Ala Asp Gly Val Ser Gln Glu Leu Phe Ser Ala Gly Leu Val Asp Gly 485 490 495

His Asp Val Val Ile Val Ala Ala Asn Leu Gln Lys Ile Val Asp Asp 500 505 510

Pro Lys Ala Leu Lys Thr Leu Thr Phe Lys Leu Ala Ser Gly Cys Asp 515 520 525

Gly Ser Glu Ile Pro Asp Glu Val Lys Leu Ile Gly Phe Ala Gln Leu 530 540

Ser Val Ser 545